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**Consolidated Edison Company of New York, Inc.
Indian Point Nuclear Generating Station
6 NYCRR Part 373**

Permit Modification

**VOLUME 2
Technical Completeness Checklist**

FEBRUARY 2001

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CONSULTING ENGINEERS**

A DIVISION OF WILLIAM F. COSULICH ASSOCIATES, P.C.

**CONSOLIDATED EDISON COMPANY OF NEW YORK, INC.
INDIAN POINT NUCLEAR GENERATING STATION
6 NYCRR PART 373 PERMIT MODIFICATION**

**VOLUME 2
TECHNICAL COMPLETENESS CHECKLIST**

**PREPARED BY
DVIRKA AND BARTILUCCI
CONSULTING ENGINEERS
WOODBURY, NEW YORK**

FEBRUARY 2001

**NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION**

**DIVISION OF SOLID
AND
HAZARDOUS MATERIALS**

TECHNICAL COMPLETENESS CHECKLIST

FOR

6 NYCRR PART 373 PERMIT APPLICATION

FROM

**HAZARDOUS WASTE TANK/CONTAINER/
CONTAINMENT BUILDING/MISCELLANEOUS UNIT
STORAGE/TREATMENT FACILITIES**

**NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF SOLID AND HAZARDOUS MATERIALS**

**TECHNICAL COMPLETENESS CHECKLIST FOR 6 NYCRR PART 373 PERMIT APPLICATION FROM HAZARDOUS
WASTE TANK/CONTAINER/CONTAINMENT BUILDING/MISCELLANEOUS UNIT
STORAGE/TREATMENT FACILITIES**

This checklist lists items which must be included in a Part 373 permit application from facilities storing/treating hazardous wastes in tanks, containers, containment buildings or miscellaneous units. This checklist also includes air emission requirements for process vents and equipment. It is intended to be used both by the applicant and the application reviewer in the Agency.

The reviewer of the application must use this checklist to assure that the application addresses all regulatory requirements. Its use by the applicant is not a regulatory requirement. However, its use is strongly recommended. By completing this document, the applicant will have developed both a summary and a table of contents for the permit application. In addition, its use will help the applicant in confirming that a complete application is being submitted. It will also help the reviewer in the Agency to review the application expeditiously. If this checklist is used by the applicant, a copy of the completed checklist should be submitted with the application.

Each required information item is briefly stated. Regulatory citations from Part 370 series regulations are provided which enable quick location of the full text of the regulation that contains each required item (if no citation is shown next to a specific item, the citation shown above the item contains the requirement).

Space is provided so that the applicant/reviewer can record the page number or other indication of where the item can be found in the application. Items that do not apply to the operation of the facility should be designated as "NA" (Not Applicable) in the comment's column.

6 NYCRR PART 373 TECHNICAL COMPLETENESS CHECK LIST

HAZARDOUS WASTE TANK/CONTAINER/CONTAINMENT BUILDING/MISCELLANEOUS UNITS STORAGE/TREATMENT FACILITIES

Facility Name: Consolidated Edison Company of New York, Inc.

Date Application Received:

Address: Indian Point Nuclear Generating Station

EPA I.D. Number: NYD991304411

Broadway and Bleakley Avenue

UPA Number:

Buchanan, NY 10511

Contact Name:

Contact Name:

Date Review Completed:

Contact Phone Number:

| SUBJECT REQUIREMENT | | 373 REFERENCE | LOCATION IN APPLICATION | COMMENTS |
|----------------------|---|--|-------------------------|----------|
| PART A – APPLICATION | | 373-1.3(d) 373-1.4(a)(5) 373-1.5(a)(1) | Volume 1 | |
| A-I | EPA ID Number | | | |
| A-II | Name of Facility | | | |
| A-III | Facility Location (Physical Address) – Land Type – Geographic Location – Facility Existence Date | | | |
| A-IV | Facility Mailing Address | | | |
| A-V | Facility Contact (person to be contacted regarding waste activities, his job title, phone number) | | | |
| A-VI | Facility Contact Address | | | |

| SUBJECT REQUIREMENT | | 373 REFERENCE | LOCATION IN APPLICATION | COMMENTS |
|---------------------|---|---------------|-------------------------|----------|
| A-VII | Operator Information <ul style="list-style-type: none"> - Name - Address - Phone Number - Operator Type - Change of Operator Indicator - Date Changed | | | |
| A-VIII | Facility Owner <ul style="list-style-type: none"> - Name - Address - Phone Number - Owner Type - Change of Owner - Date of Change | | | |
| A-IX | SIC Codes (4-digits in order of significance) <ul style="list-style-type: none"> - Primary – Secondary - Secondary | | | |
| A-X | Other Environmental Permits <ul style="list-style-type: none"> - Permit Type (enter code) - Permit Number - Description | | | |
| A-XI | Nature of Business | | | |
| A-XII | Process - Code and Design Capacities <ul style="list-style-type: none"> - Process Code - Process Design Capacity - Process Total Number of Units | | | |
| A-XIII | Other Process <ul style="list-style-type: none"> - Process Code - Process Design Capacity - Process Total Number of Units | | | |

| SUBJECT REQUIREMENT | | 373 REFERENCE | LOCATION IN APPLICATION | COMMENTS |
|---------------------|---|------------------------------------|-------------------------|----------|
| A-XIV | Description of Hazardous Wastes <ul style="list-style-type: none"> - EPA Hazardous Waste Number - Estimated Annual Quantity of Wastes - Unit of Measure - Processes <ul style="list-style-type: none"> - Process Codes - Process Description | | | |
| A-XV | Map <ul style="list-style-type: none"> - At least one mile beyond property line - Outline of facility - Location of Existing and proposed intake and discharge structures - Hazardous waste treatment, storage and disposal facilities - Underground injection wells - Springs rivers and other surface water bodies | | | |
| A-XVI | Facility Drawing to scale | | | |
| A-XVII | Photographs | | | |
| A-XVIII | Certifications <p>Owner Signature</p> <ul style="list-style-type: none"> - Name and Official Title (type or print) - Date Signed <p>Operator Signature</p> <ul style="list-style-type: none"> - Name and Official Title (type or print) - Date Signed <p><u>Note: If owners and operators of the facility are different persons, both must sign the application.</u></p> <p>Also, the signatories to the applications should be a president, secretary, treasurer or a vice-president, etc.</p> | 373-1.4(a)(2) 373-1.4(a)(5) | | |
| A-XIX | <u>Comments</u> | | | |

| SUBJECT REQUIREMENT | | 373 REFERENCE | LOCATION IN APPLICATION | COMMENTS |
|------------------------------|---|------------------|-------------------------|----------|
| PART 373 APPLICATION: | | | | |
| PART B: FACILITY DESCRIPTION | | | | |
| B-1 | <u>General Description</u> A general description of the facility. Include the nature of the business (products manufactured, service offered, etc.). Offsite facilities should identify the types of industry served; Onsite facilities should briefly describe the process(es) involved in the generation of hazardous waste. | 373-1.5(a)(2)(i) | Section 2.1 | |
| B-1(a) | <u>Capacity Authorized (Existing)</u> Capacities of different processes such as tank storage/treatment, container storage and any treatment etc., as authorized in the existing Part 360/373 permits, authorization, consent order, etc. | | Section 2.1 | |
| B-1(b) | <u>Capacity Applied For</u> If the capacities of various processes applied for are more than the authorized capacity specified in the facility's existing Part 360/373 permit, consent order or the Part A filed by the facility on 11/19/80 (or as updated) with EPA and State, a site visit/inspection should be conducted. If the capacities at the site exceed the authorized capacities, application reviewer must inform Compliance and Enforcement section in the Central Office. If the capacities at the site are same as those in the facility's permit etc., however, the applied capacities are higher than the currently authorized capacities, the Regulatory Affairs should be informed of this difference in writing for proper SEQRA determination. | | N/A | |

| SUBJECT REQUIREMENT | | 373 REFERENCE | LOCATION IN APPLICATION | COMMENTS |
|---------------------|--|--------------------|--|----------|
| B-2 | <p><u>Topographic Map: General Requirements</u></p> <p>A topographic map showing the facility and a distance of 1,000 feet around it should be submitted with the following information:</p> <ul style="list-style-type: none"> - Scale in < 200 ft. - Contours sufficient to show surface water flow - Extend 1,000 ft. beyond property - Map scale - Map date - 100-yr. Floodplain area - Surface waters including intermittent waters - Surrounding land use - Wind rose - Map orientation - Legal boundaries of the HWM facility site - Location of access control - Injection and withdrawal wells - Buildings - Structures - Sewers - Location of exempt storage areas (e.g., 90 days storage) and solid waste storage areas - Location of drywells - Loading and unloading areas - Fire control facilities - Flood control or drainage barriers - Run-off control systems - Location of hazardous waste units - Access and internal roads <p>For large facilities the use of other scales may be acceptable on a case-by-case basis.</p> | 373-1.5(a)(2)(xix) | Figure 2-1 and Exhibits 2B, 2C, 2D, 2E, 2F, 2G, 2I | |

| SUBJECT REQUIREMENT | | 373 REFERENCE | LOCATION IN APPLICATION | COMMENTS |
|---------------------|---|------------------------------------|-------------------------------|----------|
| B-2(cont'd) | (Although many of these items can be shown on a single map, it is allowable to use additional maps to display some of the information. Presentation of all of this information on a single map may sacrifice clarity.) | | | |
| B-3 | <u>Location Information: Floodplain Standard</u> Documentation of whether or not the facility is located within a 100-year floodplain including the source of data (Federal Insurance Administration Map or other maps and calculations). When FIA maps are available for the area, they must be used. When they are not available, for the area, other maps can be used. In such cases, demonstration of equivalent mapping technique should be provided. This information should include: <ul style="list-style-type: none">- 100-year floodplain level and- Other special flooding factors (e.g., wave action) that must be considered to prevent washout. | 373-1.5(a)(2)(xi)(a) | Section 2.2.12 and Exhibit 2I | |
| B-3a | <u>Demonstration of Compliance</u> For facilities located within the 100-year floodplain, a description of how the facility is designed, constructed, operated, and maintained to prevent washout of any hazardous waste during a flood. Either of the following may be used. | 373-1.5(a)(2)(xi)(b) 373-2.2(j) | N/A | |

| SUBJECT REQUIREMENT | | 373 REFERENCE | LOCATION IN APPLICATION | COMMENTS |
|---------------------|---|-------------------------------|-------------------------|----------|
| B-3a(1) | <p><u>Flood Proofing and Flood Protection</u></p> <p>A structural or other engineering study showing how design of the tanks, containers, or waste piles and the flood proofing and protection devices at the facility will prevent washout including:</p> <ul style="list-style-type: none"> – Engineering analysis of hydrodynamic and hydrostatic forces – Structural or other engineering studies of hazardous waste units and flood protection devices (e.g. flood walls, dike) and how this will prevent washout. | 373-1.5(a)(2)(xi)(b)(1) & (2) | N/A | |
| B-3a(2) | <p><u>Flood Plan</u></p> <p>Description of the procedures to be followed to remove hazardous waste to safety before the facility is flooded. The plan must address the following:</p> <ul style="list-style-type: none"> – Timing related to flood levels – Estimated time to move the waste – Description of the location to which the waste will be moved and proof of the receiving facility's eligibility to receive hazardous waste. – Procedures, equipment, and personnel to be used and the means to ensure that these resources will be available. – Potential for accidental discharge of the waste. | 373-1.5(a)(2)(xi)(b)(3) | N/A | |
| B-3b | <p><u>Plan for Compliance with Floodplain Standard</u></p> <p>For existing facilities located within the 100-year floodplain that do not comply with the floodplain standard, a plan showing how and when the facility will be brought into compliance. A compliance schedule must be included.</p> | 373-1.5(a)(2)(xi)(c) | N/A | |

| SUBJECT REQUIREMENT | | 373 REFERENCE | LOCATION IN APPLICATION | COMMENTS |
|---------------------|--|------------------------------|-------------------------|----------|
| C-1(cont'd) | <ul style="list-style-type: none"> - Type and location of storage, treatment and/or disposal of each waste stream. - Hazardous characteristics - Basis for hazard designation - Laboratory report on analyses results signed and dated - Existing published or documented data on hazardous waste or hazardous waste from a similar process (new facilities only) <p>At a minimum, the analyses should include all the information that must be known to treat, store, or dispose of the waste in accordance with 373 requirements.</p> | | | |
| C-1a | <u>Containers</u> <ul style="list-style-type: none"> - Test procedures for detecting presence of free liquids if no secondary containment has been provided for the container storage. | 373-1.5(b)(2)(i) | Section 3.1.1 | |
| C-1b | <u>Tanks</u> <ul style="list-style-type: none"> - Dimensions and capacity of each tank. | 373-1.5(c) (2) | N/A | |
| C-1c | <u>Miscellaneous Units</u> <ul style="list-style-type: none"> - For any treatment unit, waste analysis procedures and data documenting the effectiveness of the treatment. | 373-1.5(j)(4) 373-2.24(c) | N/A | |

| SUBJECT REQUIREMENT | | 373 REFERENCE | LOCATION IN APPLICATION | COMMENTS |
|---------------------|--|--|-------------------------|----------|
| C-2 | <p><u>Waste Analysis Plan</u></p> <p>A copy of the waste analysis plan required by 373-2.2(e)(2) and, if applicable, 373-2.2(e)(3). The Waste Analysis Plan should describe the procedures used to obtain chemical and physical information and data on the wastes to insure proper storage, treatment and disposal. This plan must include and distinguish between annual complete analysis and more frequent routine testing of each waste stream with the following minimum requirements:</p> | 373-1.5(a)(2)(iii) 373-2.2(e)(2)&(3) | Section 3.2 | |
| C-2a | <p><u>Parameters and Rationale</u></p> <p>A list of parameters chosen for analysis of each waste stream and an explanation of the rationale for their selection.</p> | 373-2.2(e)(2)(i) | Section 3.2.1 | |
| C-2b | <p><u>Test Methods</u></p> <p>For each waste stream, a description of the test methods used to test for parameters chosen, and specific, updated references.</p> | 373-2.2(e)(2)(iii) | Section 3.2.2 | |
| C-2c | <p><u>Sampling Methods</u></p> <p>A list of sampling methods used to obtain a representative sample of each waste stream to be analyzed. Specific references; descriptions where necessary.</p> | 373-2.2(e)(2)(iii) see 371.3(a)(3) for guidance | Section 3.2.3 | |

| SUBJECT REQUIREMENT | | 373 REFERENCE | LOCATION IN APPLICATION | COMMENTS |
|---------------------|--|-----------------------------------|-------------------------|----------|
| C-2d | <p><u>Frequency of Analysis</u></p> <p>A description of the frequency at which the initial sampling and analyses will be repeated. The frequency must be sufficient to ensure that the analysis is accurate and up-to-date. (For an on-site facility this will be whenever there is a process change. Generally, annual testing; or biennial, with annual review of the process and procedures formally entered into the records. For an incinerator, this will be as often as required to verify consistency of the waste feed.)</p> | 373-2.2(e)(2)(iv) | Section 3.2.4 | |
| C-2e | <p><u>Additional Requirements for Off-Site Facilities</u></p> <p>A description of the procedures used to inspect and/or analyze wastes generated off-site that includes procedures to decide their identity, sampling frequency, and sampling methods used. At a minimum, this section must include:</p> <ul style="list-style-type: none">- Testing procedures to screen each movement to confirm manifest and confirm description of the waste.- Description of the type of information collected from generators including nature of waste, process, sampling and analysis provided by generator, generator audit and audit form.- Tolerance limits (range of concentrations of components) for the wastes, and procedures for wastes that do not meet the criteria.- QA/QC on the generator's data-procedures for assuring their validity, assurance that EPA-approved methods are used.- Description of agreements with generator (e.g., notification whenever the waste stream changes significantly). | 373-2.2(e)(2)(v) 373-2.2(e)(3) | Section 3.2.5 | |

| SUBJECT REQUIREMENT | | 373 REFERENCE | LOCATION IN APPLICATION | COMMENTS |
|---------------------|---|--|-------------------------|----------|
| C-2f | <p><u>Additional Requirements for Facilities Handling Ignitable, Reactive, or Incompatible Wastes and in the Context of Air Emission Requirements and Incineration</u></p> <p>If the facility stores or treats ignitable, reactive, or incompatible wastes, a description of methods that will be used to meet the additional waste analysis requirements necessary for complying with the regulatory requirements specified in Section F-5.</p> <p>The waste analysis plan must include applicable analytical procedures required under certain air emission requirements. It must also include those required for hazardous waste incinerators.</p> | 373-2.2(e)(2)(vi) | Section 3.2.6 | |
| C-2g | <p><u>Quality Assurance/Quality Control (QA/QC) Plan</u></p> <p>QA/QC plan must be included. It must cite and comply with SW-846, 3rd. Ed., (or later approved revision), Chapter 1, and the QA/QC of all the EPA approved methods. In addition, any laboratory (Permittee or contract laboratory) used by the Permittee to do analysis pursuant to this permit must be certified by the New York State Department of Health Environmental Laboratory Approval Program (ELAP) in the appropriate categories of analysis, if ELAP issues certifications in such categories.</p> | 373-1.6(a)(5) Public Health Law Article 5, Title 2, Section 502 | Section 3.2.7 | |
| C-2h | <p><u>Recording of Analysis Results</u></p> <p>Indication (statement) that analysis results are maintained in the operating record until closure of the facility.</p> | 373-2.5(c)(2)(iii) | Section 3.2.8 | |

| SUBJECT REQUIREMENT | | 373 REFERENCE | LOCATION IN APPLICATION | COMMENTS |
|------------------------------|--|---------------|-------------------------|----------|
| C-2i | <u>Testing for Permits</u> Indication of the testing done to satisfy various permits, and for various treatment and disposal routes, such as permits to burn or for land burial (e.g., organics analysis to satisfy NYS land burial ban; tests for free liquids; tests for compatibility of leachates with liners and leachate collection systems). A complete chemical and physical analysis of each waste stream should be included in the permit application. | Guidance | Section 3.2.9 | |
| C-2j | <u>Additional Information</u> <ul style="list-style-type: none">– Indication of testing of run-off, spills.– Testing of unknowns; procedures for handling unknowns on-site.– Chemical compatibility schemes applied to lab-packing, storage, mixing of wastes, etc.– Indication of whether sampling and analysis is done by the facility or by outside contract, and QA/QC on contract labs.– Sampling testing and monitoring to prove effectiveness of waste treatment processes.– For landfill, plan that meets the NYSDEC and USEPA landban criteria | Guidance | Section 3.2.10 | |
| PART D - PROCESS INFORMATION | | | | |
| D-1 | Containers | | Section 4.1 | |
| D-1a | <u>Containers with Free Liquids</u> | | Section 4.1.1 | |
| | <u>Description of System</u> A description of the containment system to show compliance with 373-2.9(f). Show at least the following: | 373-1.5(b)(1) | Section 4.1.1 | |

| SUBJECT REQUIREMENT | | 373 REFERENCE | LOCATION IN APPLICATION | COMMENTS |
|---------------------|--|--|-------------------------|----------|
| D-1a(1) | <p><u>Basic Design Parameters, Dimensions, and Materials of Construction</u></p> <p>Base must underlie containers that are free of cracks or gaps and is sufficiently impervious to contain leaks, spills, and accumulated precipitation until the collected material is detected and removed.</p> <ul style="list-style-type: none">- Impervious coating specification including- Chemical compatibility chart- Construction drawing- Calculations for load bearing capacity- Expansion joints or joint spacing- Design details of loading/unloading/transfer areas | 373-1.5(b)(1)(i) 373-2.9(f)(1)(i) | Section 4.1.1.1 | |
| D-1a(2) | <p><u>Description of How Design Promotes Drainage or How Containers are Kept from Contact with Standing Liquids in Containment System</u></p> <p>Base must be sloped or the containment system must be otherwise designed and operated to drain and remove liquids resulting from leaks, spills, or precipitation, unless the containers are elevated or otherwise protected from contact with accumulated liquids. For this requirement, the applicant should address where applicable.</p> <ul style="list-style-type: none">- Describe handling, labeling and stacking practices- Grading of base- Drainage and removal system design | 373-1.5(b)(1)(ii) 373-2.9(f)(1)(ii) | Section 4.1.1.2 | |

| SUBJECT REQUIREMENT | | 373 REFERENCE | LOCATION IN APPLICATION | COMMENTS |
|---------------------|--|--|-------------------------|----------|
| D-1a(3) | <p><u>Capacity of the Containment System Compared with the Number and Volume of Containers to be Stored</u></p> <p>Sufficient capacity to contain 10 percent of the volume of containers or the volume of the largest container, whichever is greater. Information that should be included to satisfy this requirement is:</p> <ul style="list-style-type: none">- Volume of largest container- Total volume of containers- Containment structure capacity- Capacity of runoff collection system- Geographic storm intensity/frequency data- All PCB wastes in drums must be stored in a storage area having an impervious secondary containment roofed and covered on all sides with sufficient capacity to contain 25% of the total inside volume of the containers stored. | 373-2.9(f)(1)(iii) 373-1.5(b)(1)(iii) | Section 4.1.1.3 | |
| D-1a(4) | <p><u>Provisions for Preventing or Managing Run-on</u></p> <p>Run-on into the containment system must be prevented unless the collection system has sufficient excess capacity besides the 10 percent minimum to contain any run-on which might enter the system. The applicant should discuss structures used to control run-on such as:</p> <ul style="list-style-type: none">- Containment system auxiliary structures (curbs, dikes, etc.) structures (curbs, dikes, etc.)- Engineering grading design- Collection and removal system design capacity- Potential run-on | 373-1.5(b)(1)(iv) 373-2.9(f)(1)(iv) | Section 4.1.1.4 | |

| SUBJECT REQUIREMENT | | 373 REFERENCE | LOCATION IN APPLICATION | COMMENTS |
|---------------------|--|---|-------------------------|----------|
| D-1a(5) | <p><u>How Accumulated Liquids Can Be Analyzed and Removed to Prevent Overflow</u></p> <p>Spilled or leaked waste and accumulated precipitation must be removed from the sump or collection area in a timely manner as is necessary to prevent overflow of the collection system. Information that should be included is:</p> <ul style="list-style-type: none"> – How liquids will be analyzed – Removal equipment and methods (sump pump design, piping specifications, location, discharge point, and capacity) – Management of accumulated liquid including prevention of overflow | <p>373-1.5(b)(1)(v)</p> <p>373-2.9(f)(1)(v)</p> | Section 4.1.1.5 | |
| D-1b | <p><u>Containers without Free Liquids</u> (Except those containers holding F020 to F027 wastes)</p> <p>For storage areas that store containers holding wastes that do not contain free liquids, no secondary containment is required; however, a demonstration of compliance with the following is required.</p> | <p>373-1.5(b)(2)</p> <p>373-2.9(f)(2)&(3)</p> | Section 4.1.2 | |
| D-1b(1) | <p><u>Test for Free Liquids</u></p> <p>Test procedures and results or other documentation or information to show that the wastes do not contain free liquids.</p> | 373-1.5(b)(2)(i) | Section 4.1.2.1 | |
| D-1b(2) | <p>A description of storage area design and operation to drain and remove liquids or how containers are kept from contact with standing liquids must be provided in the application.</p> <ul style="list-style-type: none"> – Storage area sloped or otherwise designed and operated to drain and remove liquid resulting from precipitation, or – Containers are elevated or otherwise protected from contact with accumulated liquid | <p>373-1.5(b)(2)(ii)</p> <p>373-2.9(f)(2)(i)</p> <p>373-2.9(f)(2)(ii)</p> | Section 4.1.2.1 | |

| SUBJECT REQUIREMENT | | 373 REFERENCE | LOCATION IN APPLICATION | COMMENTS |
|---------------------|---|---|-------------------------|----------|
| D-1c | <p><u>Requirements for Ignitable or Reactive Wastes and Incompatible Wastes</u></p> <ul style="list-style-type: none"> – Sketches, drawings, or data showing compliance with the following as applicable: – Containers holding ignitable or reactive waste must be located at least 15 meters (50 feet) from facility property line. – Containers holding hazardous wastes incompatible with waste or materials stored nearby must be separated from the other materials or protected from them by means of a dike, berm, wall, or other device. – Where incompatible wastes are stored or otherwise managed in containers, a description of the procedures used to ensure compliance with the following: – Incompatible wastes must not be placed in same container unless precautions are taken to prevent reactions which 1) generate extreme heat, pressure, fire, or explosions, or violent reactions, 2) produce uncontrolled toxic mists, fumes, dusts, or gases in sufficient quantities to threaten human health or the environment, 3) produce uncontrolled flammable fumes or gases in sufficient quantities to pose a risk of fire or explosions, 4) damage the structural integrity of the device of facility, 5) through other means threaten human health or environment. – Hazardous waste must not be placed in unwashed container that previously held incompatible waste or material. – Documentation for compliance with 373-2.2(i)(1)&(2) may be based on references to published engineering and scientific literature, data from trial tests, waste analysis, or results of treatment of similar wastes by similar treatment processes with similar operating conditions. | <p>373-1.5(b)(3)</p> <p>373-2.9(g)</p> <p>373-2.9(h)(3)</p> <p>373-1.5(b)(4)</p> <p>373-2.9(h)(1) 373-2.2(i)(2)</p> <p>373-2.9(h)(2)</p> <p>373-2.2(i)(3)</p> | Section 4.1.3 | |

| SUBJECT REQUIREMENT | | 373 REFERENCE | LOCATION IN APPLICATION | COMMENTS |
|---------------------|--|--|-------------------------|----------|
| D-1(c)1 | Facilities storing ignitable wastes within 50 feet of property line must obtain a variance from the Department by providing equivalent fire protection in lieu of the 50 feet buffer zone from property line such as the NFPA code requirements. Some of additional requirements for such variances may be the following: | Guidance | Section 4.1.3 | |
| D-1(c)2 | Facilities that do not operate 24 hours must install fire detection and automatic fire suppression system in the container storage are monitored 24 hours by an independent alarm service. | Guidance | N/A | |
| D-1(c)3 | Facilities that do not have trained fire fighting crews to contain the fire until the arrival of local fire department must install automatic fire suppression system. | Guidance | | |
| D-1d | <u>Container Management</u> <ul style="list-style-type: none">- Type of containers with DOT specifications and construction material should include liners (if applicable) manufacturer specifications, dimensions.- Procedures for handling to avoid rupturing or leaking- Weekly inspections for deterioration caused by corrosion or other factors- Machinery, equipment, procedures used to move containers- Adequate aisle space for machinery, inspections, and to meet applicable codes (i.e., fire)- Maximum number, height, volume, and types of containers (always kept closed during storage except when adding or removing waste)- Number of containers per pallet- Location of ignitable, reactive, and incompatible waste | 373-2.9(b) 373-2.9(c) 373-2.9(d) | Section 4.1.4 | |

| SUBJECT REQUIREMENT | | 373 REFERENCE | LOCATION IN APPLICATION | COMMENTS |
|---------------------|--|--|-------------------------|----------|
| D-2 | <u>Tanks</u> Applicable to storage/treatment of hazardous wastes in tanks. <ul style="list-style-type: none"> Tanks used to store/treat hazardous waste containing no free liquids and situated inside a building with an impermeable. Floors are exempt from secondary containment requirements. Tanks, including sumps, which are integral part of a secondary containment system are exempt from secondary containment requirements of 373.2.10(d)(1) | 372-2.10 373-2.10(a)(1) 373-2.10(a)(2) | Section 4.2 | |
| D-2a | <u>Assessment of Existing Tank Systems</u> <ul style="list-style-type: none"> For each existing tank system <u>without</u> secondary containment meeting the requirements of D-2d below, owner/operator must obtain and keep on file at facility a written assessment by December 25, 1989. For tank systems that store/treat materials that become hazardous wastes after December 25, 1988, assessment must be done within 12 months after the date that the waste became hazardous. Assessment must be certified by an independent, qualified P.E. registered in New York and submitted with permit application. Assessment Certification must be consistent with the applicable provisions of 373-1.4(a)(5)(iv) The assessment should include: <ul style="list-style-type: none"> Tank design standards or specification according to which the tank was designed, if available Ancillary equipment design specification, if available Hazardous characteristics of waste and documentation on compatibility with tank materials Existing corrosion protection measures, including description of materials and equipment used to provide external corrosion protection. | 373-2.10(b) 373-2.10(b)(1) 373-2.10(b)(3) 373-2.10(b)(1) 373-1.5(c)(1) 373-2.10(b)(2) | N/A | |

| SUBJECT REQUIREMENT | | 373 REFERENCE | LOCATION IN APPLICATION | COMMENTS |
|---------------------|---|--|-------------------------|----------|
| D-2a | <ul style="list-style-type: none">- Documentation of age of tank system; if unavailable, estimate of age.- For non-enterable underground tanks, leak test results, accounting for temperature variations, tank-end deflection, vapor pockets, and high water table.- For enterable underground tanks and all aboveground tanks and for ancillary equipment, leak test results as above, or other tank integrity examination certified by a P.E. addressing cracks, leaks, corrosion and erosion.- Dimensions and capacity of each tank.- Description of feed systems, safety cutoffs, bypass systems, and pressure controls (e.g., vents).- P&I diagram and process flow for each tank system.- Note: Assessment of both existing and new tank systems have same basic components (except for installation information for new tank system). However, assessments of new tank systems are more detailed since the system design information will always be available.- To the extent design information is available, applicants must ensure that assessments of existing tank systems meet the requirements of Section D-2b (except installation details).- If the tank assessment has not been completed by the facility within the period specified by Part 373-2, the Compliance and Inspection must be notified. | <p>373-1.5(c)(2)</p> <p>373-1.5(c)(3)</p> <p>373-1.5(c)(4)</p> | N/A | |

| SUBJECT REQUIREMENT | | 373 REFERENCE | LOCATION IN APPLICATION | COMMENTS |
|---------------------|--|----------------------------------|-------------------------|----------|
| D-2c | <u>Installation of New Tank System</u> | 373-2.10(c) | N/A | |
| | The applicant should specify that he will ensure that the following requirements are met: | | | |
| | – Owner/operator must assure proper handling procedures during installation including backfill specification (for underground tank systems). | 373-2.10(c)(2) 373-2.10(c)(3) | | |
| | – Inspection by a Professional Engineer for the presence of: | 373-2.10(c)(2) TAGM 3019 | | |
| | – Weld breaks | | | |
| | – Punctures | | | |
| | – Scrapes of protective coatings | | | |
| | – Cracks | | | |
| | – Corrosion | | | |
| | – Structural damage | | | |
| | – Inadequate construction/installation | | | |
| | – Discrepancies will be remedied before use. | 373-2.10(c)(2) | | |
| | – Tanks and ancillary equipment must be tested for tightness. If found leaking, repairs must be made. | 373-2.10(c)(4) | | |
| | – Ancillary equipment supported and protected against physical damage and excessive stress due to settlement, vibration, expansion or contraction. | 373-2.10(c)(5) | | |
| | – Application of corrosion protection recommended by the corrosion expert. For field fabrication of protection systems, the installation must be supervised by a corrosion expert. | 373-2.10(c)(6) | | |
| | – Maintain certifications and written statements regarding proper design and installation procedures. | 373-2.10(c)(7) | | |

| SUBJECT REQUIREMENT | | 373 REFERENCE | LOCATION IN APPLICATION | COMMENTS |
|---------------------|--|---|-------------------------|----------|
| D-2d (cont'd) | <ul style="list-style-type: none">- Information on system foundation or base to provide structural support to secondary containment.- Leak detection system capable of detecting leaks within 24 hours.- Designed to remove liquid within 24 hours- Secondary containment system must include one of the following liner systems. <p><u>External Liner Systems:</u></p> <ul style="list-style-type: none">- 100% containment capacity of largest tank or 100% of all interconnected tanks whichever is greater.- Designed to prevent entry of precipitation or run-on. If not, additional capacity provided for 25-year, 24-hour rainstorms.- Liner systems must provide lateral and also vertical confinement of released material.- Free of cracks and gaps.- Chemically resistant water stops at all joints- Impermeable interior coating or lining which is compatible with the stored waste. <p><u>Vault Systems:</u></p> <ul style="list-style-type: none">- Chemically resistant water stops at all joints- exterior moisture barrier to prevent entry of moisture- Impermeable interior coating or lining which is compatible with waste.- Means to prevent formation and ignition of vapors (ignitable and reactive wastes). | <p>373-2.10(d)(3)(iii)</p> <p>373-2.10(d)(3)(iv)</p> <p>373-2.10(d)(4)</p> <p>373-2.10(d)(5)(i)</p> <p>373-2.10(d)(5)(ii)</p> | N/A | |

| SUBJECT REQUIREMENT | | 373 REFERENCE | LOCATION IN APPLICATION | COMMENTS |
|---------------------|--|---------------|-------------------------|----------|
| D-2f | <u>Requirements for Ignitable or Reactive Waste Storage in Tanks</u> <ul style="list-style-type: none">– Procedures for treating, mixing, rendering before or immediately after placement in tank so that resulting waste no longer meets definition of ignitable or reactive waste.– Procedures for storage/treatment to protect from ignition or reaction.– Designation of tank use solely for emergencies– Demonstration of buffer zone requirements as required by NFPA Tables 2-1 through 2-6 “Flammable and Combustible Liquids Code.”– Must meet general requirements for Ignitable/Reactive Wastes (373-2.2(i))– Permit application reviewer may use NFPA 30 Compliance Checklist for deciding adequacies of tank systems and their ancillary equipment for ignitable liquid storage. | 373-2.10(i) | N/A | |
| D-2g | <u>Requirements for Incompatible Wastes Storage in Tanks</u> <ul style="list-style-type: none">– Procedures in place to prevent placing incompatible wastes in same tank system– Procedures against placing waste in unwashed tank previously holding incompatible waste. | 373-2.10(j) | N/A | |

| SUBJECT REQUIREMENT | | 373 REFERENCE | LOCATION IN APPLICATION | COMMENTS |
|---------------------|---|--|-------------------------|----------|
| D-2h | <p><u>Tank Inspection</u></p> <ul style="list-style-type: none"> - A description of the <u>daily</u> inspection of at least the following: <ul style="list-style-type: none"> - Aboveground portions of tank systems to detect corrosion or releases of waste. - Data gathered from monitoring and leak detection equipment (pressure or temperature gages, level gages, etc.). - Construction materials and area immediately surrounding tank system. - Secondary containment system - Ancillary equipment (piping, pumps, valves, etc.) - Overfill protection system (flow rate controls, level controls, temperature gauges, pressure gauges, control valves). - Alarms, analyzers, instrumentation. - Structural supports and base of tank and ancillary equipment for deterioration. - A schedule and procedure for inspecting cathodic protection systems at least as follows: <ul style="list-style-type: none"> - Confirmation of proper operation within six months of installation and annually after that. - Testing of all sources of impressed current at least bimonthly (every other month). - For existing underground non-enterable tanks without secondary containment system (during phase-in period) | <p>373-2.10(f) 3.73-2.10(f)(2)</p> <p>Guidance</p> <p>Guidance</p> <p>Guidance</p> <p>373-2.10(f)(3)</p> | N/A | |

| SUBJECT REQUIREMENT | | 373 REFERENCE | LOCATION IN APPLICATION | COMMENTS |
|---------------------|--|--------------------|-------------------------|----------|
| D-2h (cont'd) | <u>Tanks without Secondary Containment</u> | 373-2.10(d)(9) | N/A | |
| | <ul style="list-style-type: none"> – Annual leak test for tank (or other integrity method) – Schedule a procedure to assess overall condition of tank system, or a leak test. During this assessment tanks must be emptied a tank to allow entry and inspection when necessary to detect corrosion or erosion of the tank sides and bottom. – Operating record must document inspection of items. | 373-2.10(f)(4) | | |
| D-2i | <u>Tank Spills and Leakage</u> | 373-2.10(g) | N/A | |
| | – Procedures for responding to tank spills or leakage including removal of spilled waste and tank repair at least as follows: | 373-2.10(g) | | |
| | – Stoppage of flow of hazardous waste into the tank system or secondary containment. | 373-2.10(g)(1) | | |
| | – Inspection of system to determine cause of release | 373-2.10(g)(1) | | |
| | – Removal of released waste within 24 hours. | 373-2.10(g)(2)(i) | | |
| | – Conduct visual inspection and based on it. | 373-2.10(g)(3) | | |
| | – Prevent further migration of leak to soils or surface water | 373-2.10(g)(3)(i) | | |
| | – Remove and dispose of visibility contaminated soil or surface water. | 373-2.10(g)(3)(ii) | | |
| | – Notification of release within 24 hours | 373-2.10(g)(4) | | |
| | – Formal report within 30 days to the Commissioner. | | | |
| | – For releases from tanks or components without secondary containment, provision for secondary containment, prior to reuse (except for leaks from aboveground component that can be visually inspected.) | | | |

| SUBJECT REQUIREMENT | | 373 REFERENCE | LOCATION IN APPLICATION | COMMENTS |
|---------------------|--|--|-------------------------|----------|
| D-3a (cont'd) | <ul style="list-style-type: none">- A post-closure plan must be included in the application if the unit has contaminated soil or groundwater that cannot be removed or decontaminated during its closure. | | N/A | |
| D-3b | <p>Prevention of Releases of the Wastes into the Environment:</p> <p>Detailed hydrologic, geologic, meteorologic assessments and land-use maps surrounding the site that ensure that releases of wastes into the following media does not occur.</p> <ul style="list-style-type: none">a. Groundwater or subsurfaceb. Surface water, or wetlands or on the soil surfacec. Air <p>This assessment should describe and consider the following in the assessment:</p> <ul style="list-style-type: none">- Volume and physical and chemical characteristics of the wastes in the unit.- Their potential to migrate into soil, liners, surface waters or soil, wetlands or other containing structures or their potential for emission and dispersal of gases, aerosols and particulate.- Effectiveness and reliability of the containing system and structure to prevent migration or reduce emissions into air.- Operating characteristics of the unit.- Hydrogeologic and geologic characteristics of the unit and the surrounding area including the atmospheric and meteorologic characteristics and topography.- Existing quality, quantity and direction of groundwater flow including other sources of contamination and their effect. | 373-1.5(j)(2)&(3) 373-2.24(b)(1),(2) and (3) | N/A | |

| SUBJECT REQUIREMENT | | 373 REFERENCE | LOCATION IN APPLICATION | COMMENTS |
|---------------------|--|---------------|-------------------------|----------|
| D-3b (cont'd) | <ul style="list-style-type: none"> - Proximity to and withdrawal rates of current and potential groundwater users. - Patterns of land use in the region. - Potential for deposition or migration of waste constituents into subsurface physical structures, and into the root zone of food-chain crops and other vegetation. - Proximity to surface waters; current and potential users of surface waters and any established water quality standards. - Existing quality of surface waters and surface soils including other sources of contamination and their effect of them. - Existing quality of air including other sources of contamination and their cumulative impact on the air. - Potential for health risk caused by human exposure to waste constituents. - Potential for damage to wildlife, domestic animals, crops, vegetation, and physical structures caused by exposure to the wastes. | | N/A | |
| D-3c | <p><u>Treatment Effectiveness:</u></p> <p>For a miscellaneous unit doing treatment, a report documenting the effectiveness of the treatment based on a laboratory or field data should be submitted as part of the application.</p> | 373-1.5(j)(4) | N/A | |

| SUBJECT REQUIREMENT | | 373 REFERENCE | LOCATION IN APPLICATION | COMMENTS |
|---------------------|--|---|-------------------------|----------|
| D-4 | <p><u>Air Emission Standards for Process Vents</u></p> <p>Applicable to hazardous waste TSDs with process vents associated with distillation, fractionation, thin-film evaporation, solvent extraction, or air or steam stripping operations that manage hazardous wastes with organic concentrations of at least 10-ppmw in units subject to 373-1 or in recycling units located at a TSD otherwise subject to 373-1 permit.</p> <p>Emission requirements for recycling units should be incorporated into existing permits when the permit is being reopened under 621.13 or renewed.</p> <p>These standards are:</p> <p>a. Total organic emissions from <u>all</u> affected process vents at the facility should be below 3 lbs/hr and 3.1 tons/yr., or</p> <p>b. Must reduce, by use of a control device, total organic emissions from all affected process vents at the facility by 95 weight percent.</p> | <p>373-2.27</p> <p>373-2.27(a)(2)</p> <p>373-2.27(a)(3)</p> <p>373-2.27(c)(1)</p> <p>373-2.27(c)(1)(ii)</p> | N/A | |

| SUBJECT REQUIREMENT | | 373 REFERENCE | LOCATION IN APPLICATION | COMMENTS |
|---------------------|---|-----------------|-------------------------|----------|
| D-4c(1) | Standards for Closed-Vents: No detectable emissions as indicated by an instrument reading of less than 500 ppm above background <u>and</u> by visual inspections. | 373-2.27(d)(11) | N/A | |
| | Application must describe the initial leak test monitoring done on the closed vents on or before the effective date and to be done annually thereafter or on a request from the Commissioner. | | | |
| | Monitoring during the test, detection instruments and their calibration procedures will conform to Reference Method 21 of 40 CFR 60 (see 373-2.27(e)(2) for specifics). | 373-2.27(e)(2) | | |
| | Application should describe how detectable emissions, if it exceeds 500 ppm, will be controlled within 15 days of detection and state that the first attempt to repair will be made within 5 days of detection. | 373-2.27(d)(11) | | |
| | The schedule is a maximum of 18 months for installing closed vents and control devices if the facility cannot meet the above requirements on the effective date of these requirements. New facilities starting operation after 12/21/90 must meet the requirements immediately. | 373-2.27(d)(1) | | |

| SUBJECT REQUIREMENT | | 373 REFERENCE | LOCATION IN APPLICATION | COMMENTS |
|---------------------|--|---|-------------------------|----------|
| D-4c(2) | <p><u>Standards for Control Devices</u></p> <p>If the facility has a <u>vapor recovery device</u> (Condenser or an adsorber), a minimum of 95% organic removal is required unless the total emissions from all affected process vents is below 3 lbs/hr and 3.1 tons/yr.</p> <p>A <u>combustion device</u> shall meet a minimum of 95% organic removal and a maximum total organic concentration of 20 ppmv of actual components and corrected to 3% oxygen dry basis; or a minimum residence time of 0.5 sec at a minimum temperature of 760°C. The vent stream should be introduced into the flame zone of the boiler or process heater.</p> <p>A <u>flare</u> will have no visible emission, a continuous flame and minimum net heating values corresponding to different exit velocities as given in 373-2.27(d)(4) and (5).</p> | <p>373-2.27(d)</p> <p>373-2.27(d)(3)</p> <p>373-2.27(d)(4)&(5)</p> | N/A | |
| D-4c(3) | <p><u>Test Method and Procedures for Compliance with Standards for Control Devices</u></p> <p>The application should include the following information to document compliance with the standards:</p> <ul style="list-style-type: none"> List of all control devices, estimated emission rates for these vents and the overall facility, annual throughputs and operating hours for each affected units, their location on a plot plan. Data supporting estimates of vent emissions from these control devices must be included; this data could be based on engineering estimate or through a source test. In either case, application should document that the test is operating at conditions that will produce worst case emission. If engineering estimates are used, the test plan should include an engineering analysis according to 373-2.27(f)(2)(iv) | <p>373-2.27(e)</p> <p>373-1.5(k)(2)</p> <p>373-27(f)(2)(ii)</p> <p>373-1.5(k)(2)</p> | N/A | |

| SUBJECT REQUIREMENT | | 373 REFERENCE | LOCATION IN APPLICATION | COMMENTS |
|---------------------|---|---------------------------------------|-------------------------|----------|
| D-4c(3) (cont'd) | <p>– If a source test is used, its plan and results thereof should be included. This plan should confirm to the requirements of 373-2.27(f)(2)(iii) and determine the total organic compound concentrations and the mass flow rates exiting the vents and reduce data based on the reference methods and calculation procedures in 40 CFR 60 (see 373-2.27(e)(3) for specific details).</p> <p>Time-weighted average of the results of three runs should be used to determine compliance.</p> | 373-2.27(e)(3) 373-2.27(f)(2)(iii) | N/A | |
| D-4c(4) | <p>Monitoring and Maintenance of Control Devices and Instruments</p> <p>Application should include the description of the monitoring equipment on the control devices, their location in the devices, accuracy, calibration and maintenance procedures and frequencies. Specifically:</p> <p>(1) A flow indicator at the inlet to each control device to show the flow at least hourly, <u>in addition</u>.</p> <p>(2) For a <u>thermal vapor incinerator</u>, a temperature monitoring device equipped with a continuous recorder and a sensor located in the combustion chamber downstream of the combustion zone; the accuracy must be +1% or 0.5 whichever is greater.</p> <p>(3) For a <u>catalytic vapor incinerator</u>, same as the thermal vapor incinerator except that both the catalytic bed inlet and outlet temperatures will be recorded.</p> <p>(4) For a <u>flare</u>, a heat sensing device equipped with a continuous recorder to show the continuous ignition of the pilot flame.</p> | 373-2.27(d)(6) | N/A | |

| SUBJECT REQUIREMENT | | 373 REFERENCE | LOCATION IN APPLICATION | COMMENTS |
|---------------------|---|--|-------------------------|----------|
| D-4c(4) (cont'd) | <p>(5) For <u>a boiler and process heater</u>, a temperature recorder of the above accuracy to record the temperature in the downstream of the combustion zone; for process heaters or boiler having a heat capacity >44 MW, a continuous recorder to monitor appropriate operating parameters to indicate a good combustion.</p> <p>(6) For a condenser:</p> <p>A continuous recorder to record the condenser inlet and outlet temperatures of the vent stream. The accuracy of measurement will be as above; or</p> <p>A continuous recorder to measure the concentration of organic compounds in the exhaust vent stream from the condenser.</p> <p>(7) <u>Carbon Adsorber Beds (in-situ regeneration)</u>:</p> <p>A monitoring device equipped with a continuous recorder to measure the organic concentration in the exhaust gas <u>or</u> to measure a parameter that indicates the proper regeneration of the beds.</p> <p>Applicant must also describe the time interval between carbon bed replacements and the basis for this estimate of time interval.</p> <p>8) <u>Carbon Adsorber Beds (Off-Site Regeneration)</u></p> <p>These carbon beds must be replaced based on measurements of organic breakthrough or other process parameters. Applicant must include information about how often the carbon bed is replaced and the basis for estimate of this interval.</p> | <p></p> <p>373-2.27(d)(6)(g)</p> <p>373-2.27(d)(8)</p> | N/A | |

| SUBJECT REQUIREMENT | | 373 REFERENCE | LOCATION IN APPLICATION | COMMENTS |
|---------------------|--|-------------------|-------------------------|----------|
| D-4c(4) (cont'd) | Alternative parameters can be monitored with prior approval of the Commissioner. If the facility proposes to use control device other than the above, the application must provide sufficient description and operating procedures of the control device. | 373-2.27(f) & (g) | N/A | |
| D-4e | Recordkeeping & Semi-Annual Report Submittal Requirements: These requirements are same as those for air emission from process equipment leaks. Thus, see Section D-5f for process equipment (except substitute control devices for various equipment). | 373-2.27(f)&(g) | N/A | |
| D-5 | Air Emission Standards for Equipment Leaks Applicable to equipment located in <u>recycling</u> and regulated units at a TSDs subject to a 373 permit, which manage hazardous wastes with organic concentration of a least 10 weight percent. For definition of terms and exemptions of certain equipment in vacuum service, see 373-2.28(a)(5)&(b). | 373-2.28(a) | N/A | |

| SUBJECT REQUIREMENT | | 373 REFERENCE | LOCATION IN APPLICATION | COMMENTS |
|---------------------|---|---------------|-------------------------|----------|
| D-5a | <p>The application should include the following information on each piece of equipment to which these standards apply:</p> <p>(1) Equipment identification number, the hazardous waste management unit in which it is located, its location on a site map, its description, hazardous waste in contact with the equipment (gas or light liquid, etc.), its concentration and method of compliance (e.g., "monthly leak detection & repair", "dual mechanical seals").</p> <p>(2) For facilities that cannot comply with the air emission standards, a schedule for installing closed-vent and control devices to come into compliance.</p> <p>(3) A performance test plan to demonstrate compliance with the performance standards if permission is sought to use a control device other than a thermal or catalytic vapor incinerator, boiler, flare, process heater, condenser or carbon adsorber system.</p> <p>If the facility already has such an equipment, records of such compliance test dates with results should be included in the application.</p> | 373-1.5(1) | N/A | |

| SUBJECT REQUIREMENT | | 373 REFERENCE | LOCATION IN APPLICATION | COMMENTS |
|---------------------|--|----------------|-------------------------|----------|
| D-5b | Application should include documentation which demonstrates compliance with the air emission standards for various types of equipment as described in Sections D-5b(1) to b(7) below. | 373-1.5(1)(4) | N/A | |
| | This documentation shall contain the records required to be kept at the facility as per the Record Keeping Requirements below. This documentation shall also include” | | | |
| | i) List of information references and sources used in preparing the documentation. | 373-1.5(1)(5) | | |
| | ii) Basic control device information including design analysis, specs, drawings & P & ID’s based on APTI Course 415: Control of Gaseous Emissions” or other engineering texts. | | | |
| | iii) A signed statement from the owner that parameters used in the design analysis represents the highest load for the equipment and that the control device is designed to operate at an efficiency of 95 wt% or greater. | | | |
| | iv) A statement that each piece of equipment subject to these emission standards shall be marked in such a manner so as to distinguish it readily. | 373-2.28(a)(4) | | |

| SUBJECT REQUIREMENT | | 373 REFERENCE | LOCATION IN APPLICATION | COMMENTS |
|---------------------|---|---------------|-------------------------|----------|
| D-5b(1) | <p><u>Pumps in Light Liquid Service</u></p> <p>The application must document how these pumps comply with the following standards:</p> <p>i) <u>Monthly</u> Monitoring for leaks using Method 21 in 40 CFR 60 unless exempt under 373-2.28(c)(e.g., due to provision of double mechanical seal systems).</p> <p>To be exempt, each dual mechanical seal system must have:</p> <p>Barrier fluid operating always at a pressure greater than the stuffing box pressure; or provided with a barrier fluid degasser connected to a control device; or equipped with a system that purges the barrier fluid into a hazardous waste stream with no detectable emissions to the atmosphere.</p> <p>The barrier fluid must have organic concentration less than 10 wt percent and provided with a sensor to detect seal failure. This sensor must be checked daily of, if provided with an audible alarm, monthly.</p> <p>If exempt, a description of the seal and the barrier fluid system justifying its exemption and listing a criterion developed by the facility to indicate failure of the seal system, the barrier fluid system or both, must be included in the application.</p> <p>ii) <u>Weekly</u> visual inspection for leaks.</p> <p>iii) Once leaks are noted from the pump or from the seal as seen visually or as indicated by an instrument reading of 10000 ppm or greater, initial attempts to fix the leak must be made within five days and completed within 15 days of its detection.</p> | 373-2.28(c) | N/A | |

| SUBJECT REQUIREMENT | | 373 REFERENCE | LOCATION IN APPLICATION | COMMENTS |
|---------------------|---|---------------|-------------------------|----------|
| D-5b(1) (cont'd) | iv) List of pumps designated for no detectable emissions (less than 500 ppm above the background level); and a description of these pumps (e.g. how they have no externally shaft penetrating the pump assembly e.g., a pump with a magnetic coupling). These pumps must be tested for compliance initially and then annually. Application should include results of this testing. | | | |
| D-5b(2) | <u>Compressors</u> The application must document how these compressors comply with the following standard: i) The compressor must have a seal system that includes a barrier fluid system with a fluid with organic concentration <10% by weight. It must have a sensor to detect any seal failure or the barrier fluid system. ii) Each sensor must be checked daily or provided with an audible alarm that must be checked monthly for proper functioning. iii) The facility must develop criterion which indicates failure of the seal system; attempts to fix any leak detected must be initiated within five days and the repair completed within 15 days. iv) Listing of compressors designated for no detectable emission; these compressors should be tested for leaks using Method 21 in 40 CFR 60 initially and then annually. | 373-2.28(d) | N/A | |

| SUBJECT REQUIREMENT | | 373 REFERENCE | LOCATION IN APPLICATION | COMMENTS |
|---------------------|---|---------------|-------------------------|----------|
| D-5b(3) | <p><u>Pressure Relief Devices in Gas/Vapor Service</u></p> <p>The application must document how these devices comply with the following standard:</p> <ul style="list-style-type: none"> i) Except during pressure releases, these devices shall be operated with no detectable emission as indicated by an instrument reading of 500 ppm above background, using Method 21 in 40 CFR 60. ii) After each release, the relief valve should be monitored and brought to conditions of no detectable emissions as indicated in (i) above within 5 days of the release. <p>Any pressure relief device with a closed vent system to capture the leaks and transporting to a control device is exempt from above.</p> | 373-2.28(e) | N/A | |
| D-5b(4) | <p><u>Sampling Connecting Systems</u></p> <p>The application should describe sampling systems to show how they are equipped with a closed purge system in which wastes are purged directly to the HW system with no emission to the atmosphere; or equipped with a closed-vent system to collect the leaks and transport them to a control device with no detectable emissions to the atmosphere.</p> | 373-2.28(f) | N/A | |
| D-5b(5) | <p><u>Open-ended Valves or Lines:</u></p> <p>The application should include a brief description about how each open-ended valve or lines at the facility are equipped with a cap, blind flange, plug or a second valve and how these are sealed always except when flows through the valves are required.</p> | 373-2.28(g) | N/A | |

[illegible]

| SUBJECT REQUIREMENT | | 373 REFERENCE | LOCATION IN APPLICATION | COMMENTS |
|---------------------|---|---------------|-------------------------|----------|
| D-5b(6) (cont'd) | ii. <u>Alternate Standard: Percentage of Valves Allowed to Leak</u> – Before implementing this option, the Commissioner must be notified that the applicant has chosen this option; – In this option, valves are tested <u>initially</u> within a week of designation and then <u>annually</u> ; up to 2 % of the valves monitored are allowed to leak; however, any leak detected must be fixed within 5 to 15 days of detection; – If the percentage of valves leaking based on the total number of valves subject to the testing, is more than 2 %, the facility must notify the Commissioner in writing and start monitoring all valves on a monthly basis. | 373-2.28(1) | N/A | |
| | iii. <u>Alternate Standards: Skip Period of Leak Detection and Repair</u> – Before implementing this option, the facility must notify the Commissioner that they are choosing this option; – In this option, the facility must monitor valve leaks monthly; after two successive monthly monitoring indicates no leak, it will switch to quarterly, after two successive quarterly monitoring indicate that the number of leaking valves is equal to or less than 2% of the total number of valves subject to the requirement, one quarterly monitoring may be skipped; if five consecutive monitoring indicate 2% or less leaking valves, three quarterly monitoring may be skipped; | 373-2.28(m) | | |

| SUBJECT REQUIREMENT | | 373 REFERENCE | LOCATION IN APPLICATION | COMMENTS |
|---------------------|---|--|-------------------------|----------|
| D-5b(6) (cont'd) | <ul style="list-style-type: none">- If the percentage of valves leaking based on the total number of valves subject to the requirement, is more than 2%, the facility must notify the Commissioner and adopt monthly monitoring for all valves. | | | |
| | <p>c. <u>Valves unsafe to Monitor:</u></p> <p>Valves determined to be unsafe to monitor due to immediate danger to monitoring personnel, are exempt from monitoring requirements of D-5b(6)(b) for valves if the facility has a written plan and adheres to it to monitor them at a time when it is safe to monitor.</p> <p>d. <u>Valves Difficult Monitor:</u></p> <p>Valves located in a HW unit in operation before June 21, 1990 and which require monitoring personnel to be raised 2 meters above the supporting surface, could be designated as difficult to monitor, these are exempt from above D-5b(6)(b) monitoring requirements for valves if they are monitored for leaks at least one annually.</p> | <p>373-2.28(h)(7)</p> <p>373-2.28(h)(8)</p> | N/A | |
| D-5b(7) | <p><u>Pumps and Valves in Heavy Liquid Service & Pressure Relief Devices in Light & Heavy Liquid Services, Flanges and other Connectors</u></p> <ul style="list-style-type: none">- These devices must be monitored for leaks using Method 21 in 40 CFR 60 within 5 days of evidence of potential leak is found by visual, audible or olfactory (by smell) methods. An instrument reading of 10,000 ppm or above indicates a leak; and initial attempts to repair the leak must be made within 5 days and completed within 15 days. | 373-2.28(i) | N/A | |

| SUBJECT REQUIREMENT | | 373 REFERENCE | LOCATION IN APPLICATION | COMMENTS |
|---------------------|--|---------------|-------------------------|----------|
| D-5b(8) | <p><u>Delay of Repairs:</u></p> <p>If the applicant proposed to delay repairs leaks, he must explain which of the following reasons apply:</p> <p>For Equipment other than Valves:</p> <ol style="list-style-type: none">Repairs of leaks can be delayed if it will result in a HWMU shutdown. In this case, the repair must occur before the end of the next shutdownDelays also are allowed if the leaking equipment is isolated from the HWM unit and contains less than 10 wt% organics. <p>For Valves:</p> <p>Repairs can be delayed if the purging during repairs will be greater than what is occurring without repair, and when repairs are effected, the purged materials must be recovered and destroyed in a control device.</p> <p>For Pumps</p> <p>Delay of repair is acceptable if the repair requires the use of a dual mechanical seal with a barrier fluid system and the repair is completed within 6 months of detection.</p> <p><u>Delay Beyond the First Shutdown</u></p> <p>Delay of repair beyond the first shutdown is acceptable if the next shutdown occurs within 6 months after the first one and the HWM unit has run out of valve assembly stocks beyond control.</p> | 373-2.28(j) | N/A | |

| SUBJECT REQUIREMENT | | 373 REFERENCE | LOCATION IN APPLICATION | COMMENTS |
|---------------------|--|----------------|-------------------------|----------|
| D-5c | <p><u>Marking of Leaking Equipment</u></p> <p>i. When each leak is detected, a weather-proof and readily identifiable tag with the equipment I.D. number, dates of potential and actual leak detection will be attached to the leaking equipment.</p> <p>ii. Except for valves, these tags can be removed once the leak is fixed; it can be removed for valves only after it has been monitored for 2 successive months for no leak.</p> <p>iii. Once a leak is detected, the following information must be entered in the inspection log and operating record:</p> <ul style="list-style-type: none">– Leaking equipment I.D.#;– Dates of potential and actual leak detection;– Dates of each attempt to repair;– Repair method used;– Leak rate noted after each attempt to repair as “Above 10,000 ppm”;– Justification for any delay of repair and owner’s signature justifying this delay.– Expected date of repair if the leak is not repaired within 15 days; and the date of actual successful repair of leak. | 373-2.28(o)(3) | N/A | |

| SUBJECT REQUIREMENT | | 373 REFERENCE | LOCATION IN APPLICATION | COMMENTS |
|---------------------|--|------------------------------------|-------------------------|----------|
| D-5d | <p><u>Test Methods & Procedures</u></p> <p><u>Leak Test Monitoring</u> and the instruments used for leak testing shall comply with Reference Method 21 in 40 CFR 60; Calibration must be done daily using gases of Zero-air and a mixture of n-hexane or methane at a concentration of about 10,000 ppm with air.</p> <p><u>Testing for No Detectable Emissions</u> will be done same way as above except that the background level also must be determined same way. The arithmetic difference between the maximum and the background should be less than 500 ppm.</p> | 373-2.28(n) | N/A | |
| D-5e | <p><u>Waste Analysis</u></p> <p>See Section on waste analysis.</p> | | Section 3.2 | |
| D-5(f) | <p><u>Record Keeping and Submission of Semiannual Reports:</u></p> <p>The application should include copies of records kept at the facility to document compliance with standards for process vent emissions. This record keeping should include:</p> <ul style="list-style-type: none"> - List of equipment subject to emission standards of 373-2.28, their locations at the facility, type of equipment, % wt of organics in the hazardous waste stream in the equipment, gas/liquid, etc. - If a source test was done to demonstrate compliance of a control device, copies of test plan with results of test. - Records supporting the requirements of D-5c (Marking of Leaking Equipment (see D-5c above). - Design documentation, monitoring, operating, and inspection information for each closed-vent system and control device. | 373-2.28(o) & (p) 373-1.5(1)(4) | N/A | |

| SUBJECT REQUIREMENT | | 373 REFERENCE | LOCATION IN APPLICATION | COMMENTS |
|---------------------|---|---------------|-------------------------|----------|
| D-5(f) (cont'd) | <ul style="list-style-type: none">- List identification numbers for equipment subject to air emission requirements.- A list of identification numbers for equipment designated for no detectable emissions, signed by the owner/operator.- A list of equipment identification numbers for pressure relief devices subject to air emission requirement.- Dates of compliance tests done for no detectable emissions done on pumps, compressors, pressure relief devices in gas/vapor service and valves in valves in gas/vapor and light liquid service, background and actual emission levels measured during these tests.- List of identification numbers for equipment in vacuum service.- List of valves unsafe to monitor and difficult to monitor with reasons and the plan for monitoring these valves.- If alternate standards for valves in gas/vapor or light liquid service is to be used, the schedule of monitoring and the percent valves found leaking during each monitoring period.- Criteria used for determining failure of pump and compressor seal system or barrier fluid system or both; any changes and reasons for these changes to the criteria. <p><u>Exemption Basis:</u></p> <p>Analysis and data used to determine exemptions from equipment air emission requirements including:</p> <ul style="list-style-type: none">- Design capacity of the unit- Analysis of all influent and effluent streams to each hazardous waste management unit subject to the requirements of equipment air emissions and whether these are heavy liquids. | | N/A | |

| SUBJECT REQUIREMENT | | 373 REFERENCE | LOCATION IN APPLICATION | COMMENTS |
|---------------------|--|---------------|-------------------------|----------|
| D-5(f) (cont'd) | <ul style="list-style-type: none">– Up-to-date of analysis and data used to determine whether each equipment is subject to air emission standards; if process knowledge is used, supporting documentation. If process changed after last determination, again another determination has to be made.– Records of leak monitoring and operating information must be kept for 3 years. <p><u>Reporting Requirements</u></p> <p>A semiannual report must be submitted to the Commissioner with the following information:</p> <ul style="list-style-type: none">– Facility's EPA I.D.#– Fore each of the reporting period, the equipment I.D.# (valves, pumps, compressors) for which the repair was not initiated within 5 days and completed in 15 days.– Dates of unit shutdowns during the period.– For each month, any exceedances of control device performance outside the design specifications for more than 24 hours, the duration, its cause and corrective measures taken.– If during the reporting period, all leaking equipment were fixed as required and no control devices performed outside the design specs for more than 24 hours, no report is required. | 373-2.28(p) | N/A | |
| D-6 | <p><u>Containment Buildings</u></p> <p>Applicable to storage and treatment of hazardous wastes in containment buildings which meet the following standards in D-6a & b below, these buildings are not subject to land disposal restrictions. Applicant storing and treating hazardous wastes in such a building must demonstrate how it meets the design and operating criteria of D-6a & b.</p> | 373-2.30(a) | N/A | |

| SUBJECT REQUIREMENT | | 373 REFERENCE | LOCATION IN APPLICATION | COMMENTS |
|---------------------|--|--|-------------------------|----------|
| D-6a(1) (cont'd) | <ul style="list-style-type: none">- No incompatible hazardous wastes will be placed in the unit or on the secondary containment system which could cause the unit or the secondary containment system to leak or corrode or fail. | 373-2.30(b)(1)(iii) | | |
| | <p>b. <u>Design of the Primary Liner:</u></p> <p>A containment building must have a primary barrier (liner). The application should describe how this barrier is designed to withstand the movement of personnel, waste, and handling equipment during the life of the unit taking into account the physical and chemical characteristics of the waste to be managed.</p> | 373-2.30(b)(1)(iv) | | |
| D-6a(2) | <p><u>Secondary Containment System:</u></p> <p>If a containment building manages hazardous wastes with free liquids or treated with free liquids, applicant must demonstrate that the building has a secondary containment system meeting the following requirements. If no such secondary containment has been provided, the applicant must document the results of a paint filter test done on the wastes or describe other means used to ensure that no free liquid is in the building.</p> <p><u>Design Requirements for Secondary Containment</u></p> <ul style="list-style-type: none">- Applicant must describe the design of the following components of the secondary containment system: <p><u>Primary Barrier</u></p> <ul style="list-style-type: none">- Design and construction of the primary barrier and how its design prevents migration of hazardous constituents into the barrier (e.g., a geomembrane covered by a concrete wear surface)- Design and construction of a liquid collection and removal system to minimize the accumulation of liquid on the primary barrier. | <p>373-2.30(b)(2)</p> <p>373-2.30(b)(2)(i)</p> <p>373-2.30(b)(2)(ii)</p> | N/A | |

| SUBJECT REQUIREMENT | 373 REFERENCE | LOCATION IN APPLICATION | COMMENTS |
|---|---|-------------------------|----------|
| <p>D-6a(2) (cont'd)</p> <ul style="list-style-type: none"> - A description of how soon the collected liquid will be removed. <p><u>Secondary Barrier</u></p> <ul style="list-style-type: none"> - Description of the secondary barrier, how it is designed and constructed to prevent migration of hazardous constituents into the barrier. <p><u>Leak Detection System</u></p> <ul style="list-style-type: none"> - Description of the design and construction of the leak detection system and how it detects the failure of the primary barrier and collects the accumulated wastes at the earliest possible time. The application should describe how often the accumulation system is checked for collected liquids. <p>At a minimum, the leak detection system should have:</p> <ul style="list-style-type: none"> - A bottom slope of 1% or more - Constructed of a granular material with a minimum hydraulic conductivity of 1×10^{-2} cm/sec and a minimum thickness of 12 inches or constructed of synthetic geonet drainage materials with a minimum transitivity of 3×10^{-5} m²/sec. - If treatment is done in the building, the permit application should describe how the treatment is conducted to prevent release of liquids to other portions of the building. - The application should describe how the secondary containment system is compatible with the wastes and the liquids handled in the building and how it has sufficient thickness and strength to withstand the pressure of the overlaying materials and the heavy equipment used in the building. | <p>373-2.30(b)(2)(iii)</p> <p>373-2.30(b)(2)(iii)('a')</p> | | |

| SUBJECT REQUIREMENT | | 373 REFERENCE | LOCATION IN APPLICATION | COMMENTS |
|---------------------|---|--|-------------------------|----------|
| D-6a(2) | <u>Waiver of the Secondary Containment Requirement for up to 2 Years on a Site-Specific Basis</u> – This weaver is not available anymore since the deadlines for seeking a delay had expired. | 373-2.30(b)(iv) | N/A | |
| D-6(b)(1) | <u>Operating Requirements for Containment Buildings</u> – How the primary barrier is maintained to ensure that it is free of cracks, gaps or corrosion to prevent releases from the primary barrier. – How the levels of wastes within the containment building will always be below the height of the containment wall. – Measures taken to prevent tracking (spreading) of wastes outside the unit due to the movements of the equipment and personnel. Decontamination area used to rinse the equipment and shower personnel; and how the rinsates are collected and managed. – Measures taken to prevent fugitive dust emissions through doors, windows, vents, cracks, etc. and methods used to determine fugitive emissions must be 40 CFR 60, Appendix A, Method 22. – A description of air pollution control devices for particulate collection from the building and how they are operated to keep the fugitive emissions at the state of art level. These devices should be operated at all times during routine operating and maintenance operations. – A certification from a New York State P.E. stating that the building meets the containment building requirements must be kept at the site. New units must obtain this certification before operating the building. | 373-2.30(b)(3) 373-2.30(b)(3)(i)(‘c’) 373-2.30(b)(3)(ii) | N/A | |

| SUBJECT REQUIREMENT | | 373 REFERENCE | LOCATION IN APPLICATION | COMMENTS |
|--|--|------------------------|-------------------------|----------|
| PART F - PROCEDURES TO PREVENT HAZARDS | | | Section 6.0 | |
| F-1 | Security | 373-1.5(a)(2)(iv) | Section 6.1 | |
| F-1a | <u>Security Procedures and Equipment</u> Part 373 application must include a description of the security procedures and equipment required by 373-2.2(f) or a justification demonstrating the reasons for requesting a waiver of this requirement. | 373-1.5(a)(2)(iv) | Section 6.1.1 | |
| F-1a(1) | <u>24-Hour Surveillance System</u> A 24-hour surveillance system (e.g., television monitoring or surveillance by guards or facility personnel) that continuously monitors and controls entry onto the active portion of the facility. – Procedures and personnel to be used – Location and description of equipment | 373-2.2(f)(2)(i) | Section 6.1.2 | |
| F-1a(2) | <u>Barrier and Means to Control Entry</u> (In lieu of a 24-hour surveillance system, the applicant may elect to use a barrier and other means to control entry.) | 373-2.2(f)(2)(ii) | Section 6.1.3 | |
| F-1a(2)(a) | (a) <u>Barrier</u> An artificial or natural barrier (e.g., a fence in good repair or a fence combined with a cliff) that completely surrounds the active portion of the facility. – Height – Material of construction | 373-2.2(f)(2)(ii)(‘a’) | Section 6.1.3 | |

| SUBJECT REQUIREMENT | | 373 REFERENCE | LOCATION IN APPLICATION | COMMENTS |
|---------------------|---|------------------|-------------------------|----------|
| F-1a(3) | <u>Warning Signs</u> The facility must have a sign with the legend. "Danger - Unauthorized Personnel Keep Out", which must be posted at each entrance to the active portion of the facility and at other locations, in sufficient numbers to be seen from any approach to the active portion. The legend must be written in English and in any other language predominant in the area surrounding the facility and must be legible from a distance of at least 25 feet. Existing signs with a legend other than "Danger - Unauthorized Personnel Keep Out" may be used if the legend on the sign indicates that only authorized personnel are allowed to enter the active portion and that entry onto the active portion can be dangerous. | 373-2.2(f)(3) | Section 6.1.4 | |
| F-1b | <u>Waiver</u> The owner or operator must prevent the unknowing entry, and minimize the possibility for the unauthorized entry, of persons or livestock onto the active portion of the facility, unless the owner or operator can demonstrate to the commissioner that: | 373-2.2(f)(1) | N/A | |
| F-1b(1) | <u>Injury to Intruder</u> Physical contact with the waste, structure, or equipment within the active portion of the facility will not injure unknowing or unauthorized persons or livestock that may enter the active portion of a facility; and | 373-2.2(f)(1)(i) | N/A | |

| SUBJECT REQUIREMENT | | 373 REFERENCE | LOCATION IN APPLICATION | COMMENTS |
|---------------------|---|--------------------------------|-------------------------|----------|
| F-1b(2) | <p><u>Violation caused by Intruder</u></p> <p>Disturbance of the waste or equipment by the unknowing or unauthorized entry of persons or livestock onto the active portion of a facility will not cause a violation of the requirements of 6 NYCRR Part 373.</p> <p>Note: To address F-1b(1) and F-1b(2) the applicant should include:</p> <ul style="list-style-type: none"> – Nature and duration of hazard potential from wastes – Equipment and structures to minimize potential for an intruder to 1) cause a spill; 2) mix incompatible wastes; 3) ignite ignitable or reactive wastes; 4) damage containment or monitoring systems – Features that prevent contact with waste | 373-2.2(f)(1)(ii) | N/A | |
| F-2 | <p><u>Inspection Schedule</u></p> <p>A copy of the general inspection schedule required by 373-2.2(g)(2) including, where applicable, specific requirements of 373-2.9(e), 373-2.10(d) and (f) 373-2.15(g), 373-2.24(c), 373-2.27(d), and 373-2.28(c), (d) and (i), 373-2.30(b)(iii) and (iv) of this subpart where applicable.</p> | 373-1.5(a)(2)(v) 373-2.2(g) | Section 6.2 | |

| SUBJECT REQUIREMENT | | 373 REFERENCE | LOCATION IN APPLICATION | COMMENTS |
|---------------------|--|--|-------------------------|----------|
| F-2a | <p><u>General Inspection Requirements</u></p> <p>A description of the facility inspection schedule (schedule must be kept at the facility) for the following equipment:</p> <ul style="list-style-type: none"> – Monitoring equipment – Emergency and safety equipment – Security devices – Operating and structural equipment that are vital to prevent, detect, or respond to environmental or human health hazards. – Testing as necessary of communications or alarm systems, fire protection equipment and decontamination equipment. <p>Examples of monitoring equipment that should be inspected at treatment, storage, and disposal facilities are:</p> <ul style="list-style-type: none"> – Scales – Flow and liquid level monitors – Hazardous gas detectors – pH monitors – Leachate monitors – Pressure sensors – Temperature gauges <p>Examples of monitoring equipment that should be inspected at facilities with incinerators are:</p> <ul style="list-style-type: none"> – Waste flow monitors and recorders – Auxiliary fuel flow monitors | <p>373-1.5(a)(2)(v) 373-2.2(g)(1)&(2)</p> <p>373-2.2(g)(1)&(2)</p> <p>373-2.3(d)</p> | Section 6.2.1 | |

| SUBJECT REQUIREMENT | | 373 REFERENCE | LOCATION IN APPLICATION | COMMENTS |
|---------------------|---|---------------|-------------------------|----------|
| F-2a (cont'd) | <ul style="list-style-type: none">- combustion air flow monitors- Temperature monitors- Flame sensors- CO monitors and recorders- Pressure differential indicators- Pressure sensors- pH monitors- Ammeters for measuring blower current draw <p>Examples of safety and emergency equipment to be inspected at TSD facilities are:</p> <ul style="list-style-type: none">- Respirators- Communications systems- Emergency lighting and power systems- Smoke detectors- Fire protection equipment- First aid equipment and supplies- Decontamination equipment- Protective clothing <p>Examples of security devices to be inspected at TSD facilities are:</p> <ul style="list-style-type: none">- Surveillance systems- Barrier surrounding facility- Locking devices | | | |

| SUBJECT REQUIREMENT | | 373 REFERENCE | LOCATION IN APPLICATION | COMMENTS |
|---------------------|---|--------------------|-------------------------|----------|
| F-2a (cont'd) | <p>Examples of operating and structural equipment at TSD facilities are:</p> <ul style="list-style-type: none">– Spill detection devices– Spill control and collection equipment– Fire and explosion barriers– Ventilation equipment– Sump pumps– Dikes, bases and foundations <p>In addition, areas such as waste storage, mixing, loading, and unloading areas, which are subject to spills, must be inspected.</p> | | | |
| F-2a(1) | <p><u>Type of Problems</u></p> <p>The schedule must identify the types of problems to look for during the inspection (e.g., leaks, deterioration, readings out of specified range, missing items or materials, inoperative equipment, etc.)</p> | 372-2.2(g)(2)(iii) | Section 6.2.2 and 6.2.1 | |
| F-2a(2) | <p><u>Frequency of Inspection</u></p> <p>A description of the inspection frequency must be provided for items on the schedule. The frequency of inspection should be based on the rate of possible deterioration of equipment and the probability of an environmental or human health incident if the deterioration, malfunction, or operator error goes undetected between inspections. Areas subject to spills, such as loading and unloading areas, but be inspected daily when I use.</p> | 373-2.2(g)(2)(iv) | Section 6.2.3 and 6.2.1 | |

| SUBJECT REQUIREMENT | | 373 REFERENCE | LOCATION IN APPLICATION | COMMENTS |
|---------------------|--|--|-------------------------|----------|
| F-2b | <u>Specific Process Inspection Requirements</u> At a minimum, the inspection schedule must include the terms and frequencies called for in 373-2.9(e), 373-2.10(d) and (f), 373-2.15(g), 373-2.24(c), 373-2.27(d), and 373-2.28(c), (d) and (i) of this subpart where applicable. | 373-1.5(a)(2)(v) 373-2.2(g)(2)(iv) | Section 6.2.4 and 6.2.1 | |
| F-2b(1) | <u>Container Inspection</u> A description of the weekly inspection of containers and container storage areas for leaks in containers or deterioration of containers and the containment system caused by corrosion or other factors. | 373-2.9(e) | Section 6.2.4.1 | |
| F-2b(2) | Tank Inspection (See Section D-2h) | | | |
| F-2b(3) | <u>Process Vents (Closed-Vents & Control Devices)</u> – Daily inspection of monitoring instruments of the control devices | 373-2.27(d)(6) to (11) 373-2.27(d)(6) to (11) | Section 6.2.4.3 | |
| F-2b(4) | <u>Process Equipment Emissions</u> – Weekly visual inspection of pumps for seals – Daily inspection of pump/compressor seal sensors or if provided with an audible alarm, monthly checking of audible alarm. | | Section 6.2.4.4 | |
| F-2b(5) | <u>Containment Building Inspection</u> A description of how, on a weekly basis, the containment building, its vicinities, leak detection system and the monitoring systems are inspected and data entered into the inspection records. | 373-2.30(b)(3)(iv) | Section 6.2.4.5 | |

| SUBJECT REQUIREMENT | | 373 REFERENCE | LOCATION IN APPLICATION | COMMENTS |
|---------------------|--|--------------------------------|------------------------------|----------|
| F-2c | <u>Remedial Action</u> A description of procedures for taking remedial actions when inspections reveal problems or when problems are imminent. (These may alternately be described in the contingency plan (see 373-2.10(d)(3), 373-2.11(e)(1) and 373-2.9(b)) | 373-2.2(g)(3) | Section 6.2.5 and 7.0 | |
| F-2d | <u>Inspection Log</u> A copy or description of the inspection log or summary form including the following: <ul style="list-style-type: none"> – Dates and times of inspections – Names) of inspector(s) – Observations made – Date and nature of repairs or remedial actions taken | 373-2.5(d)(2) 373-2.2(g)(4) | Section 6.2.6 and Exhibit 6A | |
| F-3 | <u>Waiver of Preparedness and Prevention Requirements</u> A justification of any request for a waiver of preparedness and prevention requirements of 373-2.3. | 373-1.5(a)(2)(vi) | N/A | |
| F-3a | <u>Equipment Requirements</u> Unless it can be demonstrated that none of the hazards posed by waste handled at the facility could require a particular kind of equipment specified below, the facility must have the following equipment. (These requirements are not specifically listed in 373-1.5 for inclusion in a Part 373) | 373-2.3(d) | Section 6.3.1 and 7.0 | |
| F-3a(1) | <u>Internal Communications</u> An internal communications or alarm system capable of providing immediate emergency instruction (voice or signal) to facility personnel. | 373-2.3(c)(1) | Section 6.3.1.1 | |

| SUBJECT REQUIREMENT | | 373 REFERENCE | LOCATION IN APPLICATION | COMMENTS |
|---------------------|--|---------------------|--------------------------------|----------|
| F-3a(2) | <u>External Communications</u> A device such as a telephone (immediately available at the scene of operations) or a handheld two-way radio, for summoning emergency assistance from local police departments, or state or local emergency response teams. | 373-2.3(c)(2) | Section 6.3.1.2 | |
| F-3a(3) | <u>Emergency Equipment</u> <ul style="list-style-type: none"> – Fire control equipment (including special extinguishing equipment, such as that using foam, inert gas, or dry chemicals and portable fire extinguishers. – Spill control equipment – Decontamination equipment | 373-2.3(c)(3) | Section 6.3.1.3 and Exhibit 7B | |
| F-3a(4) | <u>Water for Fire Control</u> One of the following: <ul style="list-style-type: none"> – Water at adequate volume and pressure to supply water hose streams, or – Foam-producing equipment, or – Automatic sprinklers or water spray systems | 373-2.3(c)(4) | Section 6.3.1.4 | |
| F-3b | <u>Aisle Space Requirement</u> Requests for a waiver of the aisle space requirement must be accompanied by a demonstration that aisle space is not needed to allow the unobstructed movement of personnel, fire protection equipment, or spill control equipment to any area of facility operation in an emergency. | 373-2.3(f) | Section 6.3.1.5 | |
| F-4 | <u>Preventive Procedures, Structures, and Equipment</u> A description of procedures, structures, or equipment used at the facility for the following must be included. | 373-1.5(a)(2)(viii) | Section 6.4 | |

| SUBJECT REQUIREMENT | | 373 REFERENCE | LOCATION IN APPLICATION | COMMENTS |
|---------------------|--|--------------------------|-------------------------|----------|
| F-4a | <u>Unloading Operations</u> Prevention of hazards in unloading operations (e.g., use of ramps or special forklifts). | 373-1.5(a)(2)(viii)('a') | Section 6.4.1 | |
| F-4b | <u>Runoff</u> Prevention of runoff from hazardous waste handling areas to other areas of the facility or environment, or prevention of flooding (e.g., berms, dikes, trenches). | 373-1.5(a)(2)(viii)('b') | Section 6.4.2 | |
| F-4c | <u>Water Supplies</u> Prevention of contamination of water supplies. | 373-1.5(a)(2)(viii)('c') | Section 6.4.3 | |
| F-4d | <u>Equipment and Power Failure</u> Mitigation of effects of equipment failure and power outages. | 373-1.5(a)(2)(viii)('d') | Section 6.4.4 | |
| F-4e | <u>Personnel Protection Equipment</u> Prevention of undue exposure of personnel to hazardous waste (e.g. protective clothing). | 373-1.5(a)(2)(viii)('e') | Section 6.4.5 | |
| F-5 | <u>Prevention of Reaction of Ignitable, Reactive and Incompatible Wastes</u> | | Section 6.5 | |

| SUBJECT REQUIREMENT | | 373 REFERENCE | LOCATION IN APPLICATION | COMMENTS |
|---------------------|--|---|-------------------------|----------|
| F-5a | <p><u>Precautions to Prevent Ignition or Reaction of Ignitable or Reactive Waste</u></p> <p>A description of the precautions taken by a facility that handles ignitable reactive or incompatible waste to demonstrate compliance with 373-2.2(i) including documentation demonstrating compliance with 373-2.2(i)(3). Precautions to prevent actual ignition, including separation from sources of ignition such as open flames, smoking, cutting and welding, hot surfaces, frictional heat, sparks (static, electrical, or mechanical), spontaneous ignition (e.g., heat producing chemical reactions), and radiant heat. Demonstration that when ignitable or reactive waste is being handled, the owner or operator confines smoking and open flames to specifically designated locations. "No Smoking" signs must be conspicuously placed wherever a hazard exists from ignitable or reactive waste.</p> | 373-1.5(a)(2)(ix) 373-2.2(i)(1)&(3) | Section 6.5.1 | |
| F-5b | <p><u>General Precautions for Handling Ignitable or Reactive Waste and Mixing of Incompatible Waste</u></p> <p>A description of the precautions taken by a facility that treats, stores, or disposes of ignitable or reactive waste, or accidentally mixes incompatible waste or incompatible wastes and other materials, to prevent reactions which (1) generate extreme heat or pressure, fire or explosions or violent reactions; (2) produce uncontrolled flammable fumes, dusts, or gases, in sufficient quantities to threaten human health or the environment, (3) produce uncontrolled flammable fumes or gases in sufficient quantities to pose a risk of fire or explosions; (4) damage the structural integrity of the device or facility; (5) by similar means threaten human health or the environment.</p> <p>Documentation to meet requirements of 373-2.2(i)(1) or (2) may be based on references to published scientific or engineering literature, data from trial tests, waste analyses, or results of treatment of similar wastes by similar treatment processes and under similar operating conditions.</p> | 373-1.5(a)(2)(ix) 373-2.2(i)(2) 373-2.2(i)(3) | Section 6.5.2 | |

| SUBJECT REQUIREMENT | | 373 REFERENCE | LOCATION IN APPLICATION | COMMENTS |
|--|---|--|-------------------------|----------|
| F-5c | <u>Management of Ignitable or Reactive Wastes in Containers</u> Sketches, drawings, or data demonstrating that containers of ignitable or reactive waste are located at least 15 meters (50 feet) from the facility's property line. | 373-1.5(b)(3) 373-2.9(g) | Section 6.5.3 | |
| F-5d | <u>Management of Incompatible Wastes in Containers</u> A description of procedures to demonstrate compliance with 373-2.9(h)(1) and (2) and 373-2.2(I)(2) and (3). <ul style="list-style-type: none">- The procedures used to ensure that incompatible wastes and materials are not placed in the same container (unless 373-2.2(i)(2) is complied with) or in an unwashed container that previously held incompatible waste.- Dikes, berms, walls, or other devices used to separate wastes in containers, piles, open tanks, or surface impoundments. | 373-1.5(b)(4) 373-2.9(h)(1) | Section 6.5.4 | |
| F-5e | <u>Management of Ignitable or Reactive Wastes in Tanks (See Section D-2f)</u> | | Section 6.5.5 | |
| F-5f | <u>Incompatible Wastes in Tanks (See Section D-2g)</u> | | Section 6.5.6 | |
| PART G - CONTINGENCY PLAN A copy of the contingency plan required in 373-2.4. Include, where applicable, specific requirements in 373-2.11(e). An existing spill prevention control plan can be amended to incorporate hazardous waste management provisions sufficient to comply with 373-2.4 requirements. | | 373-1.5(a)(2)(vii) 373-2.4 373-2.4(c)(2) | Section 7.0 | |

| SUBJECT REQUIREMENT | | 373 REFERENCE | LOCATION IN APPLICATION | COMMENTS |
|---------------------|---|--------------------------------|--|----------|
| G-1 | <u>General Information</u> <ul style="list-style-type: none"> – Facility name and location and owner or operator name – Site plan – Description of facility operations | 373-2.4(c) | Section 7.1, Section 2.1 Exhibit 2A | |
| G-2 | <u>Emergency Coordinators</u> <ul style="list-style-type: none"> – Names, addresses, office and home phone numbers, and duties of primary and alternate coordinators in sequence as alternates – A statement authorizing designated coordinators to commit the necessary resources to implement the contingency plan. – At all times, these must be at least one emergency coordinator at the site or available on call. | 373-2.4(c)(4) 373-2.4(f) | Section 7.2 | |
| G-3 | <u>Implementation</u> Criteria for implementation of contingency plan for any potential emergency <ul style="list-style-type: none"> – Fires/explosions – Unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water | 373-2.4(c)(1) 373-2.4(g)(4) | Section 7.3 | |
| G-4 | Emergency Response Procedures | | Section 7.4 | |
| G-4a | <u>Notification</u> Methodology for immediate notification of facility personnel and necessary state or local agencies. | 373-2.4(g)(1) | Section 7.4.1 | |

| SUBJECT REQUIREMENT | | 373 REFERENCE | LOCATION IN APPLICATION | COMMENTS |
|---------------------|--|--------------------------------|------------------------------|----------|
| G-4b | <u>Identification of Hazardous Materials</u> Available date and/or procedures for identification of hazardous materials involved in the emergency and quantity and areal extent of release. Include information on: <ul style="list-style-type: none">– Characteristics of waste– Exact source– Amount– Areal extent of release | 373-2.4(g)(2) | Section 7.4.2 | |
| G-4c | <u>Hazard Assessment</u> <ul style="list-style-type: none">– Procedure for assessment of possible hazards to the environment and human health.– Procedure for determining the need for evacuation and notification of authorities. The authorities to be notified must include the On-Scene-Coordinator for that area designated by the government or the National Response Center. | 373-2.4(g)(3) 373-2.4(g)(4) | Section 7.4.3 | |
| G-4d | <u>Control Procedures</u> <ul style="list-style-type: none">– Specific responses and control procedures to be taken in the event of a fire, explosion, or release of hazardous waste to air, land or water. | 373-2.4(c)(1) | Section 7.4.4, Exhibit 7A | |

| SUBJECT REQUIREMENT | | 373 REFERENCE | LOCATION IN APPLICATION | COMMENTS |
|---------------------|--|------------------|-------------------------|----------|
| G-4e | <p><u>Prevention of Recurrence or Spread of Fires, Explosions, or Releases</u></p> <p>During an emergency situation, a description of the necessary steps to be taken to ensure that fires, explosions, or releases do not occur, reoccur, or spread to other hazardous waste at the facility.</p> <p>Steps must include, where applicable:</p> <ul style="list-style-type: none">– Shut-down of processes and continued monitoring of them– Collecting, containing, and treating released wastes– Removing and isolating containers– Proper use of fire control structures (e.g., fire doors), system (e.g. sprinkler systems), and equipment (e.g. extinguishers) | 373-2.4(g)(5) | Section 7.4.5 | |
| G-4f | <p><u>Storage and Treatment or Released Material</u></p> <ul style="list-style-type: none">– Provisions for treatment, storage, or disposal of any hazardous waste resulting from a release, fire, or explosion at the facility.– Equipment available– Procedures for development of these resources– Methods to contain, treat, and clean up a hazardous release and decontaminate the affected area. | 373-2.4(g)(7) | Section 7.4.6 | |
| G-4g | <p><u>Incompatible Waste</u></p> <p>Provisions for prevention of incompatible waste from being treated, stored, or located in the affected areas until cleanup procedures are completed.</p> | 373-2.4(g)(8)(i) | Section 7.4.7 | |

| SUBJECT REQUIREMENT | | 373 REFERENCE | LOCATION IN APPLICATION | COMMENTS |
|---------------------|--|-----------------------------------|-------------------------|----------|
| G-4h | <u>Post-Emergency Equipment Maintenance</u> Procedures for ensuring that all emergency equipment listed in the contingency plan is cleaned and fit for its intended use before operations are resumed. | 373-2.4(g)(8)(ii) | Section 7.4.8 | |
| G-4i | <u>Container Spills and Leakage</u> Procedures for responding to container spills or leakage including removal of spilled waste. | 373-2.4(g)(7) 373-2.9(f)(1)(v) | Section 7.4.9 | |
| G-4j | <u>Tank Spills and Leakage</u> Procedures for responding to tank spills or leakage including removal of spilled waste. | 373-2.4(g)(7) 373-2.10(g) | Section 7.4.10 | |
| G-5 | <u>Emergency Equipment</u> Location, description, and capabilities of emergency equipment. This should include: <ul style="list-style-type: none">– Spill control equipment– Fire control equipment– Personnel protective items such as respirators and protective clothing– First aid and medical supplies– Emergency decontamination equipment– Emergency communication and alarm systems | 373-2.4(c)(5) | Section 7.5 | |

| SUBJECT REQUIREMENT | | 373 REFERENCE | LOCATION IN APPLICATION | COMMENTS |
|---------------------|--|---|----------------------------|----------|
| G-6 | <u>Coordination Agreements</u> <ul style="list-style-type: none">- A description of coordination agreements with local police and fire departments, hospitals, contractors, and state and local emergency response teams to familiarize them with the facility and actions needed in case of emergency.- A statement indicating that a copy of the contingency plan has been submitted to these organizations.- If applicable, documentation of refusal to enter into a coordination agreement | 373-2.3(g) 373-2.4(c)(3) 373-2.4(d)(2) 373-2.3(g)(2) | Section 7.6, Exhibit 7C | |
| G-7 | <u>Evacuation Plan</u> <p>The plan must include:</p> <ul style="list-style-type: none">- Criteria for evacuation- A description of signal(s) to be used to begin evacuation- Primary and alternate evacuation routes and areas to assemble, marked in a site plan- If required, how the residents living around the facility will be informed about the need for evacuating the surrounding areas. | 373-2.4(c)(6) | Section 7.7 | |
| G-8 | <u>Required Reports</u> <ul style="list-style-type: none">- Provisions for submission of reports of emergency incidents within 15 days of occurrence- Notation of such incidents in the operating record identifying the time, date, and details of these emergency incidents | 373-2.4(g)(10) | Section 7.8 | |

| SUBJECT REQUIREMENT | | 373 REFERENCE | LOCATION IN APPLICATION | COMMENTS |
|-----------------------------|---|-------------------------------------|---|----------|
| PART H - PERSONNEL TRAINING | | 373-1.5(a)(2)(xii) 373-2.2(h) | Section 8.0 | |
| | <u>Outline of Training Program</u> An outline of both the introductory and continuing training programs by owners or operators to prepare the personnel to operate and maintain the facility in a safe manner as required to demonstrate compliance with 373-2.2(h). Include a brief description of how training will be designed to meet actual job tasks in accordance with requirements in 373-2.2(h)(1)(iii) (Note: On-the-job training may be used to comply with these requirements. | 373-1.5(a)(2)(xii) | Section 8.1 | |
| H-1a | <u>Job Titles and Duties</u> For each employee whose position at the facility is related to hazardous waste management, the following must be maintained at the facility. <ul style="list-style-type: none">- Job title- Job duties- Job description | 373-2.2(h)(4)(ii) | Section 8.1.1 Exhibit 8A | |
| H-1b | <u>Training Content, Frequency and Techniques</u> In both introductory and continuing training (including an annual review of the initial training) for <u>each</u> employee describe: <ul style="list-style-type: none">- Training content- Frequency of training- Technique(s) used in training | 373-2.2(h)(4)(iii) 373-2.2(h)(3) | Section 8.1.2 Exhibit 8B, Exhibit 8C | |

| SUBJECT REQUIREMENT | | 373 REFERENCE | LOCATION IN APPLICATION | COMMENTS |
|---------------------|--|--|---------------------------|----------|
| H-1c | <u>Training Director</u> Demonstration that the program is directed by a person trained in hazardous waste management. – Credentials of training director | 373-2.2(h)(1)(ii) | Section 8.1.3 | |
| H-1d | <u>Relevance of Training to Job Position</u> A brief description of how instructions of facility personnel in hazardous waste management procedures (including contingency plan implementation) is relevant to their positions (to demonstrate compliance with 373-2.2(h)(1)(ii)) | 373-2.2(h)(1)(ii) | Section 8.1.4, Exhibit 8B | |
| H-1e | <u>Training for Emergency Response</u> Documentation that the training program trains facility personnel to respond effectively to emergencies and trains them to be familiar with emergency procedures, emergency equipment, and emergency systems, include where applicable: – Procedures for using, inspecting, repairing, and replacing facility emergency and monitoring equipment – Key parameters for automatic waste feed cutoff systems – Communications or alarm systems – Response to fires or explosions – Response to groundwater contamination incidents – Shutdown of operations | 373-2.2(h)(1)(iii) 373-2.2(h)(1)(iii)(‘a’) 373-2.2(h)(1)(iii)(‘a’) 373-2.2(h)(1)(iii)(‘c’) 373-2.2(h)(1)(iii)(‘d’) 373-2.2(h)(1)(iii)(‘e’) 373-2.2(h)(1)(iii)(‘f’) | Section 8.1.5 | |

| SUBJECT REQUIREMENT | | 373 REFERENCE | LOCATION IN APPLICATION | COMMENTS |
|--|--|---|-------------------------|----------|
| H-2 | <u>Implementation of Training Program</u> <ul style="list-style-type: none"> – Indication that training has been and will be successfully completed by facility personnel within 6 months of their employment or assignment to a facility, or transfer to a new position at a facility, or transfer to a new position at a facility, whichever is later. (Note: employees hired after the effective date of these regulations must not work in unsupervised positions until they have completed the training requirements.) – Records documenting that the required training has been given to and completed by facility personnel must be maintained. | 373-2.2(h)(4)(iv) 373-2.2(h)(2) | Section 8.2 | |
| PART 1 - CLOSURE PLANS, POST-CLOSURE PLANS, AND FINANCIAL REQUIREMENTS | | 373-1.5(a)(2)(xiii-xvii) 373-2.7 373-2.8 373-2.9(i) 373-2.10(h) 373-2.15(h) 373-2.24(d) | Section 9.0 | |
| I-1 | <u>Closure Plans</u> A copy of the written closure plan required by 373-2.7(c) | 373-1.5(a)(2)(xiii) 373-2.7(c)(1) | Section 9.0 | |
| I-1a | <u>Closure Performance Standard</u> A description of how closure: <ul style="list-style-type: none"> – Minimizes need for further maintenance – Minimizes or eliminates releases of hazardous wastes, hazardous waste constituents, leachate, and contained run-off to groundwater, surface water, or to the atmosphere | 373-2.7(b)(1) 373-2.7(b)(2) | Section 9.0 | |

| SUBJECT REQUIREMENT | | 373 REFERENCE | LOCATION IN APPLICATION | COMMENTS |
|---------------------|--|---|-------------------------|----------|
| I-1b | <p><u>Content of Plan</u></p> <p>A description of steps necessary to perform closure including:</p> <ul style="list-style-type: none">– Description of how each hazardous waste management unit will be closed.– Identify units which will be in operation during closure of the facility until final closure.– Estimate of maximum inventory (must be the design storage capacity).– Description of methods for removing, transporting, treating, storing, or disposing of all hazardous wastes.– Identification of types of off-site hazardous waste management units to be used.– Detailed description of steps needed to remove or decontaminate all hazardous waste residues from containment system components, structures, soils and cleaning equipment.– Identification of decontamination criteria and methods for sampling and testing.– Detailed description of other activities such as run-on and run-off control, etc. during closure.– Schedule for closure of each hazardous waste management unit and for final closure of facility– Expected year of final closure (for facilities using trust funds to establish financial assurance).– Notification of Partial and Final Closure | <p>373-2.7(c)(2)</p> <p>373-2.7(c)(2)(i)</p> <p>373-2.7(c)(2)(ii)</p> <p>373-2.7(c)(2)(iii)</p> <p>373-2.7(c)(2)(iii)</p> <p>373-2.7(c)(2)(iv)</p> <p>373-2.7(c)(2)(v)</p> <p>373-2.7(c)(2)(vi)</p> <p>373-2.7(c)(2)(vii)</p> <p>373-2.7(c)(4)(i-iii)</p> | Section 9.1 | |

| SUBJECT REQUIREMENT | | 373 REFERENCE | LOCATION IN APPLICATION | COMMENTS |
|---------------------|---|---|-------------------------|----------|
| I-1c | <p><u>Time Allowed for Closure</u></p> <p>The schedule for closure must show:</p> <ul style="list-style-type: none">– All hazardous wastes will be treated, removed off-site, or disposed of on-site within 90 days from receipt of final volume of waste.– All closure activities will be completed within 180 days from receipt of final volume of waste. | <p>373-2.7(d)(1)</p> <p>373-2.7(d)(2)</p> | Section 9.4 | |
| I-1c(1) | <p><u>Extensions for Closure Time</u></p> <p>The Commissioner may approve a longer period of time for removal of all hazardous waste or completion of all closure activities if owner/operator complies with all applicable requirements for requesting a permit modification and demonstrates within 30 days prior to expiration of the 90-day or 180-day period respectively that:</p> <ul style="list-style-type: none">– Activities required to remove all hazardous waste or to complete final closure will, of necessity, take longer than 90 days or 180 days respectively, or:– The Hazardous Waste Management Unit or facility has the capacity to receive additional hazardous wastes.– There is reasonable likelihood that the owner/operator or another person will recommence operation within 1 year, and– Closure would be incomplete with continued operation, and– Owner/operator has taken or will take all steps to prevent threats to human health and environment from unclosed but inactive facility, including compliance with all applicable permit requirements. | <p>373-2.7(d)(1)(i)</p> | N/A | |

| SUBJECT REQUIREMENT | | 373 REFERENCE | LOCATION IN APPLICATION | COMMENTS |
|---------------------|---|---------------|-------------------------|----------|
| I-1c(1) (cont'd) | <ul style="list-style-type: none">- Disposal or decontamination of equipment, structures, and soils. By removing any hazardous waste or hazardous constituents the owner/operator becomes a generator and must handle that in accordance with Part 372. | 373-2.7(e) | | |
| I-1d | <p><u>Closure of Containers</u></p> <p>A description of how, at closure, all hazardous waste residues will be removed from the containment system, and how remaining containers, bases, and soil containing or contaminated with hazardous waste or hazardous waste residues will be decontaminated or removed. The description should address the following:</p> <ul style="list-style-type: none">- Hazardous waste removal and disposal.- Container decontamination and disposal- Site decontamination and disposal including linings, soil, and washes.- Verification of decontamination.- Maximum inventory. | 373-2.9(i) | Section 9.1 | |

| SUBJECT REQUIREMENT | | 373 REFERENCE | LOCATION IN APPLICATION | COMMENTS |
|---------------------|--|----------------|-------------------------|----------|
| I-1e | <p><u>Closure of Tanks</u></p> <p>A description of how, at closure, all hazardous waste residues will be removed from tanks discharge control equipment, and discharge control equipment, and discharge confinement structure, and how the facility will be decontaminated. The description should address the following:</p> <ul style="list-style-type: none">– Waste removal from tanks and equipment.– Decontamination of all components.– Verification of decontamination.– Verification of decontamination.– Disposal of wastes, residues, and washes– Maximum inventory. | 373-2.10(h) | N/A | |
| I-1g | <p><u>Containment Buildings</u></p> <p>A description of how, at closure, all hazardous waste residues will be removed from containment buildings, equipment, structures and sub-soils contaminated with wastes and leachates, and how the facility will be decontaminated. The description should address the following</p> <ul style="list-style-type: none">– Waste removal from the building, structure and equipment– Decontamination of all components.– Verification of decontamination.– Disposal of wastes, residues, and washes– Maximum inventory.– If not all wastes will not be removed, a post-closure plan must be submitted. | 373-2.30(c)(1) | N/A | |

| SUBJECT REQUIREMENT | | 373 REFERENCE | LOCATION IN APPLICATION | COMMENTS |
|---------------------|---|--|-------------------------|----------|
| I-1f | <u>Certification of Closure</u> <ul style="list-style-type: none"> Within 60 days of completion of final or partial closure, owner/operator must submit a certification by an independent professional engineer registered in NY that the units/facility were closed in accordance with the approved closure plan. No later than the submission of the certification of closure of each hazardous waste disposal unit (e.g., tanks, containment buildings with post closure requirements), owner/operator must submit a survey plat certified by a professional land surveyor registered in NY to the local zoning authority or to the local county clerk. | 373-2.7(f) 373-2.7(f)(1) 373-2.7(f)(2) | Section 9.4 | |
| I-1(g) | <u>Post-Closure and Use of Property</u> (Applicable to tank systems and containment buildings that are required under 373-2.10(h) and 373-2.30(c)(2) to meet requirements for landfills). <ul style="list-style-type: none"> Post-closure care for 30 years beginning after completion of closure including monitoring, reporting and maintenance in accordance with 373-2.6 and 373-2.14. Post-closure use of property must never be allowed to disturb the integrity of the final cover, liners, any components of the containment system, or the facility's monitoring system. Post-closure care activities must be in accordance with the approved post-closure plan. | 373-2.7(g) 373-2.7(g)(1)(i) 373-2.7(g)(3) 373-2.7(g)(4) | N/A | |

| SUBJECT REQUIREMENT | | 373 REFERENCE | LOCATION IN APPLICATION | COMMENTS |
|---------------------|--|---|----------------------------|----------|
| I-1(h) | <p>Post-Closure Plan</p> <p>(Applicable to tank systems and containment buildings that are required under 373-2.10(h) and 373-2.30(c) to met requirements for landfills)</p> <p>– A written contingent post-closure plan</p> | <p>373-2.7(h)</p> <p>373-2.7(h)</p> <p>373-2.10(h)(3)</p> <p>373-2.30(c)(2)</p> | N/A | |
| I-2 | <p><u>Closure/Post-Closure Cost Estimate</u></p> <p>A copy of the most recent closure cost estimate prepared in accordance with 373-2.8(c).</p> <p>– Cost estimate for post-closure or cost estimate for contingent post-closure (for tank systems and containment buildings required to meet landfill requirements).</p> <p>– Fully loaded</p> <p>– No salvage credits</p> <p>– Current year costs</p> <p>– Cost adjusted annually from anniversary date of first cost estimate</p> <p>– Revision of cost estimate whenever plan revision increases cost estimate</p> <p>– Maintain cost estimate at facility for life of facility</p> <p>– Based on point in operating life when extent and manner of operation would make closure most expensive.</p> <p>– Third party costs</p> <p>– No zero cost for hazardous waste that might have economic value</p> | <p>373-1.5(a)(2)(xv)</p> <p>373-1.5(a)(2)(xvi)</p> <p>373-2.10(h)(3)(iii)</p> <p>373-2.8(e)(1)</p> <p>373-2.8(c)(1)(iii)</p> <p>373-2.8(c)(1)</p> <p>373-2.8(c)(2)</p> <p>373-2.8(c)(2)</p> <p>373-2.8(c)(3)</p> <p>373-2.8(e)(3)</p> <p>373-2.8(c)(4)</p> <p>373-2.8(e)(4)</p> <p>373-2.8(c)(1)(i)</p> <p>373-2.8(c)(1)(ii)</p> <p>373-2.8(c)(1)(iv)</p> | Section 9.5 and Exhibit 9A | |

| SUBJECT REQUIREMENT | | 373 REFERENCE | LOCATION IN APPLICATION | COMMENTS |
|---------------------|--|--|----------------------------|----------|
| I-3 | <p><u>Financial Assurance for Closure/Post-Closure</u></p> <p>Application should include a copy of the established financial assurance mechanism for facility closure adopted in compliance with 373-2.8(b) or (f). The mechanism must be one of the following (I-3a through I-3f) and include due dates and standard wording.</p> <p>(For tank systems and containment buildings ements, financial assurance must be based on cost estimates for closure and post-closure).</p> | <p>373-1.5(a)(2)(xv) 373-1.5(a)(2)(xvi)</p> <p>373-2.10(h)(3)(iv) 373-2.30(c)(2)</p> | Section 9.6 and Exhibit 9B | |
| I-3a | <p><u>Closure Trust Fund</u></p> <p>A copy of the closure trust fund agreement with the wording required in 373-2.8(j)(1) and a formal certification of acknowledgment.</p> <ul style="list-style-type: none"> - Trustee must be a bank or approved institution which has the authority to act as trustee. - New facilities must submit 60 days in advance of receiving wastes; - Mechanics <ul style="list-style-type: none"> - Pay-in period is first 5 years or life of permit or remaining life of facility whichever is shorter, - First pay-in from new or revenue-oriented facilities must be the total closure cost. - For non-revenue oriented facilities: Annual payment is equal to unfunded liability divided by years left in pay-in period. | <p>373-2.8(d)(1) 373-2.8(f)(1) 373-2.8(j)(1)</p> | Section 9.6.1 | |

| SUBJECT REQUIREMENT | | 373 REFERENCE | LOCATION IN APPLICATION | COMMENTS |
|---------------------|---|---|-------------------------|----------|
| I-3b | <u>Surety Bond</u> A surety bond from a Federally accepted surety company meeting the following requirements: <ul style="list-style-type: none"> – Surety bond guaranteeing payment into a standby closure trust fund. A copy of the surety bond with the wording required in 373-2.8(j)(2), a copy of the standby trust fund agreement with language of 373-2.8(j)(1). | 373-2.8(d)(2) 373-2.8(f)(2) 373-2.8(j)(2) | Section 9.6.2 | |
| I-3c | <u>Closure Letter of Credit</u> A copy of the closure letter of credit with the wording required in 373-2.8(j)(3). <ul style="list-style-type: none"> – Must establish a standby trust fund with language in 373-2.8(j)(1) wording. – Amount reflects current cost estimate. – Schedule “A” showing current closure cost estimate | 373-2.8(d)(3) 373-2.8(f)(3) 373-2.8(j)(3) | Section 9.6.3 | |
| I-3d | <u>Closure Insurance</u> To demonstrate that the owner or operator has closure insurance, he or she must submit to the Commissioner 60 days before hazardous waste is received a certificate of insurance worded as specified in 373-2.8(j)(4). <ul style="list-style-type: none"> – Noncancellable policy, automatic renewal. – Insurer licensed by NYS Dept of Insurance or eligible surplus lines carrier in NYS. – Certificate of Insurance with 373-2.8(j)(4) wording. – Funds available whenever final closure occurs. | 373-2.8(d)(4) 373-2.8(f)(4) 373-2.8(j)(4) | Section 9.6.4 | |

| SUBJECT REQUIREMENT | | 373 REFERENCE | LOCATION IN APPLICATION | COMMENTS |
|---------------------|---|---|-------------------------|----------|
| I-3e | <p><u>Financial Test and Corporate Guarantee for Closure</u></p> <p>Owner/operator of facility other than revenue oriented facilities may demonstrate that he passes a financial test with the following criteria:</p> <ul style="list-style-type: none">- Net working capital and tangible net worth each at lest six times sum of current closure and post-closure costs and current plugging and abandonment costs.- Tangible net work \$10 million.- U.S. assets at least 90% of total assets or at least six times all closure and post-closure costs and current plugging and abandonment costs.- Specified bond rating requirement or two of the following three ratios:<ul style="list-style-type: none">- Ratio of total liabilities to net worth less than 2.0;- Ratio of the sum of net income plus depreciation, depletion and amortization to total liabilities greater than 0.1;- Ratio of current assets to current liabilities greater than 1.5;- Application must include:<ul style="list-style-type: none">- Letter signed by owner/operator's chief financial officer and worded as specified in 373-2.8(j)(5).- Copy of a report of the company's latest financial statements drafted by an independent certified public accountant (CPA). | <p>373-2.8(d)(5) 373-2.8(f)(5)</p> <p>373-2.8(j)(5) 373-2.8(j)(6)</p> | Section 9.6.5 | |

| SUBJECT REQUIREMENT | | 373 REFERENCE | LOCATION IN APPLICATION | COMMENTS |
|---------------------|--|--------------------------------|-------------------------|----------|
| I-3e (cont'd) | <ul style="list-style-type: none">– Copy of a report from the owner's or operator's independent CPA to the owner or operator stating that he or she has examined the data in the letter from the chief financial officer and that it is consistent with the amounts in the independently-audited year-end financial statements for the latest fiscal year and that no matters came to attention to cause him to believe that the data should be adjusted.– The owner or operator other than a revenue-oriented facility may submit a corporate guarantee worded as required by 373-2.8(j)(6). This guarantee provided that the guarantor, which must be the parent company of the owner or operator, will perform final closure in accordance with the closure plan if the owner or operator fails to do so or will establish a closure trust fund for the owner or operator. The guarantor must meet the above financial test criteria and submit all of the above items with the corporate guarantee. | | | |
| I-3f | <u>Combinations</u> | | N/A | |
| I-3f(1) | <u>Use of Multiple Financial Mechanisms</u> A copy of a combination of trust fund agreements, surety bond guaranteeing payment into a closure trust fund, letters of credit, and insurance, which provide financial assurance for the amount of closure. Combined financial assurance must be at least equal to the adjusted closure cost estimate. Financial assurance instruments must meet requirements of 373-2.8(d)(1),(2),(3), or (4) which include closure trust fund, surety bond guaranteeing payment into a closure trust fund, closure letter of credit and closure insurance, respectively. | 373-2.8(d)(6) 373-2.8(f)(6) | N/A | |

| SUBJECT REQUIREMENT | | 373 REFERENCE | LOCATION IN APPLICATION | COMMENTS |
|---------------------|---|---|-------------------------|----------|
| I-3f(2) | <p><u>Use of Financial Mechanism for Multiple Facilities</u></p> <p>A copy of a financial assurance mechanism for more than one facility showing for each facility, the EPA ID number, name, address, and amount of closure funds assured by the mechanism. Total funding must be no less than the sum required for each facility considered separately. Financial test applies to sum of closure and post-closure costs for all facilities.</p> | <p>373-2.8(d)(7)</p> <p>373-2.8(f)(7)</p> | Section 9.6.6 | |
| I-4 | <p><u>Liability Requirements</u></p> <p>Owner/operator must maintain liability coverage for sudden accidental occurrences (and non-sudden accidental occurrences for tank systems and containment buildings subject to post-closure requirements) in the amounts specified below:</p> <ul style="list-style-type: none"> For sudden accidental occurrences, at least \$1 million per occurrence with annual aggregate of at least \$2 million, exclusive of legal defense costs. For non-sudden accidental occurrences, at least 4.5 million per occurrences with annual aggregate of at least \$9 million, exclusive of legal defense costs. <p>Liability coverage may be demonstrated as follows:</p> <ul style="list-style-type: none"> Insurance policy must be amended by attachment of Hazardous Waste Facility Liability Endorsement worded as specified in 373-2.8(j)(7). The issuing insurance company a NYS Insurance Department insurer. Certificate of liability insurance worded as specified in 373-2.8(j)(8). A signed duplicate or original of the endorsement or certificate Owner/operator of facility which is not revenue-oriented may submit and pass a financial test or use a corporate guarantee as specified in 373-2.8(h)(6) and (7). | <p>373-2.8(h)</p> <p>373-2.8(h)(1)</p> <p>373-2.8(h)(2)</p> <p>373-2.8(h)(1)(i)(‘a’)</p> <p>373-2.8(h)(2)(i)(‘a’)</p> <p>373-2.8(h)(1)(i)(a)</p> <p>373-2.8(h)(2)(i)(a)</p> <p>373-2.8(h)(1)(i)(‘a’)</p> <p>373-2.8(h)(2)(i)(‘a’)</p> <p>373-2.8(h)(1)(ii)</p> <p>373-2.8(h)(2)(ii)</p> | Section 9.7 | |

| SUBJECT REQUIREMENT | | 373 REFERENCE | LOCATION IN APPLICATION | COMMENTS |
|---------------------|---|-----------------------|-------------------------|----------|
| I-4 | <ul style="list-style-type: none">Owner/operator of facility which is not revenue-oriented may use the financial test, insurance, corporate guarantee, letter of credit, surety bond and trust fund (except that the owner of operator may not combine a financial test covering part of the liability coverage requirement with a guarantee unless the financial statement of the owner or operator is not consolidated with the financial statement of the guarantor), combination of financial test or insurance or combination or corporate guarantee and insurance. <p>Items the financial test must include:</p> <ul style="list-style-type: none">Letter from CFOAuditor reportAuditor opinionOther information requested by the CommissionerAcceptable ratios | 373-2.8(h)(6) | | |
| I-5 | <p><u>Variance Procedures and Adjustments by Commissioner</u></p> <p>If a variance on liability insurance is sought, information to evaluate the degree and duration of risk sufficient to allow Commissioner to make a judgment on reduction of required liability. The financial responsibility levels specified above for liability insurance for sudden and non-sudden accidental occurrences may be adjusted downward if the owner or operator can prove to the Commissioner that these levels are not consistent with the degree and duration of risk at the owner's or operator's facility. Conversely, the Commissioner may adjust the levels of financial responsibility up or down, based on his assessment of the degree and duration of the risk associated with the facility.</p> | 373-2.8(h)(3) and (4) | N/A | |

| SUBJECT REQUIREMENT | | 373 REFERENCE | LOCATION IN APPLICATION | COMMENTS |
|---------------------|---|-------------------|-------------------------|----------|
| I-6 | Owners and operators who combine coverage levels for sudden and non-sudden accidental occurrences must maintain liability coverage in the amount of at least \$5.5 million per occurrence and \$11 million annual aggregate. This liability coverage may be demonstrated as specified in 373-2.8(h)(2) subparagraphs (i), (ii), (iii), (iv), (v) or (vi). | 373-2.8(h)(2) | N/A | |
| Part J | <u>Other Federal and State Laws</u> <u>Waste Minimization:</u> Owner/Operator must provide certification, no less often than annually, that a program is in place to reduce the volume and toxicity of hazardous waste that is generated, and the methods used are most practicable. | 373-2.5(c)(2)(ix) | Section 10.0 | |
| Part K | <u>Certification</u> Application must be certified by the owner/operator of the facility. <u>Where the owner and operator of the facility are different persons, this part 373 application certification should be signed by both the owner and operator of the facility.</u> <ul style="list-style-type: none">- Certification of application by a principal executive of the company of at least the level of vice president..- Certification by a general partner or proprietor for a partnership or sole proprietorship, respectively.- Certification by a principal executive officer or ranking elected official for a municipality, state, federal, or other public agency. | 373-1.4(a)(2) | Section 11.0 | |